

EN

Horizon Europe

Work Programme 2025

1. General Introduction

IMPORTANT NOTICE:

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The Commission expressly disclaims liability for any future changes of the content of this document.

About this work programme

Horizon Europe supports research and innovation (R&I) especially through *work programmes*, which set out funding opportunities for research and innovation activities.¹

This introduction covers the following components of Horizon Europe for 2025:

- Marie Skłodowska-Curie actions²;
- Research infrastructures;
- Health;
- Culture, Creativity and Inclusive Society;
- Civil Security for Society;
- Digital, Industry and Space;
- Climate, Energy and Mobility;
- Food, Bioeconomy, Natural Resources, Agriculture and Environment;
- European innovation ecosystems;
- Widening participation and spreading excellence, and reforming and enhancing the European R&I system;
- EU Missions;
- New European Bauhaus Facility.

In addition to the work programme parts mentioned above, the *General Annexes* to this work programme set out the general conditions applying to the calls of the work programme such as:

- eligibility rules;
- details on how to submit an application; and
- how the Commission services evaluate applications.

Getting started

Are you interested in applying for funding through Horizon Europe? You can find the topics that are currently open for applications on the [Funding and Tenders Portal](#) . The network of [National Contact Points](#) stands ready to answer any questions you might have on the application process in your own language.

You can also find more about the Horizon Europe programme at the [Horizon Europe web page](#).

Delivering on EU policy priorities

Europe's competitiveness - and its global leadership in becoming a clean and digital economy – depends on a new age of invention and ingenuity. Research and innovation are at the heart of this transformation, driving scientific breakthroughs and the development of critical technologies and innovative solutions.

With this work programme, the EU and countries associated to Horizon Europe will invest over 7.2 billion in research and innovation that delivers on the EU's ambitions to build a united, more competitive, fair and resilient Europe. A substantial part of this funding will be dedicated to targeted actions that support Europe's sustainable prosperity and competitiveness and its race to becoming a clean and digital economy.

With war inside Europe and the situation in the Middle East, this work programme will place a special emphasis on actions that contribute to build a safe and secure Europe, help reduce critical dependencies and build a more robust economic base through targeted actions.

This work programme for 2025 is a key step towards achieving the research and innovation priorities outlined in the [Horizon Europe strategic plan for 2025-2027](#). Its actions are expected to substantially contribute to the three overarching, interlinked key strategic orientations: *the green transition, the digital transition and a more resilient, competitive, inclusive and democratic Europe*. These orientations are aligned with the EU's main policy priorities as set out in [the Commission's Political Guidelines for 2024-2029](#) and folded out in [the Competitiveness Compass for the EU](#), all of which require significant contributions from R&I to meet their objectives.

Europe's research and innovation system depends on world-class **research infrastructures** that are open and accessible to all researchers in Europe and beyond. Through the dedicated work programme part, excellent research and breakthrough science and innovation will be supported with cutting-edge, interconnected, specialised and sustainable Research Infrastructures.

Concretely, this work programme includes actions under **Cluster 1 Health** aimed at advancing the foundations of preventive health and developing innovative therapeutic interventions for non-communicable diseases. Research opportunities range from exploring the health impacts of pollution and environmental degradation, to developing cutting-edge treatments, novel tools and technologies to address public health needs and reduce health inequities, taking into account vulnerable and marginalised populations. Several actions are dedicated to brain health, including mental health, with opportunities to address treatments for degenerative illnesses and advance research into autism.

Furthermore, actions will support research and innovation in biotechnology and artificial intelligence (AI) to improve healthcare. This includes advancing biotechnological tools to develop advanced treatment options and leveraging Generative AI models to accelerate biomedical research and speed up the transfer of biotech-based treatments from discovery to market approval. Several actions are dedicated to supporting the competitiveness of SMEs and help secure European leadership in breakthrough technologies. In addition, Cluster 1 will support actions, including Generative AI models, to enhance the resilience, sustainability and efficiency healthcare systems. Cluster 1 will maintain a strong focus on addressing pandemic preparedness, and antimicrobial resistance in a One health perspective.

Cluster 2 Culture, Creativity and Inclusive Society will work on equipping European societies to face today's most pressing challenges, linked with technological, demographic, and climate change, as well as a changing geopolitical landscape and a growing number of threats to our democracies. Actions will target increased hatred in society, mis-/disinformation and foreign interference, the polarisation of political debate, and the isolation caused by group dynamics on social media, to reinforce our democracies. Moreover, R&I will boost sustainable growth and job creation through cultural and creative industries and sectors and promote AI for creativity and innovation. A new European partnership for Resilient Cultural Heritage will be launched, focusing on the impact of climate change. Finally, researchers will be asked to find a way to make our societies more inclusive and fairer, by tackling gender-based violence, including online, promoting mental health and protecting vulnerable groups, advancing on competencies development and addressing emerging migration challenges.

The global economic system is fractured by geopolitical and commercial tensions. Organised crime in Europe is on the rise. Spikes in terrorist attacks prevent citizens from feeling safe. In line with the Competitiveness Compass, **Cluster 3 Civil Security for Society** will help address these challenges and support the work towards a new European Internal Security Strategy, a new Counter-Terrorism Agenda and new European action plans, notably against drug trafficking and for cybersecurity. Research under this Cluster will focus on projects for a safer, more secure and resilient Europe, securing critical infrastructures and protecting against hybrid and cyber threats, contributing to saving lives in emergency situations and strengthening Europe's borders, making them more secure and more fluid. Cluster 3 will also continue to support actions on preventing and preparing against natural and human-made threats, particularly those linked to chemical, biological, radiological and nuclear (CBRN) as well as risks to security from the impact of climate change.

Research to support the clean and digital transition and autonomous access to Space is key to Europe's competitiveness and open strategic autonomy³, to industrial sustainability and to setting human-centred standards. Thus, this work programme, and especially actions in **Cluster 4 Digital, Industry and Space** will support research and innovation in these areas. One of the key issues addressed is to develop safer, more trustworthy and human-centric Artificial Intelligence (AI), and in tackling the risks stemming from its misuse. Another one is the preparation of an in-space operations and services pilot mission, which will be key to ensure the sustainability of our EU space assets. All these initiatives will support the implementation of the Competitiveness Compass for the EU.

Horizon Europe will support through R&I the goals of the Clean Industrial Deal driving the decarbonisation of our economy and society, implementing the Competitiveness Compass for the EU, and promoting a more sustainable approach to production and consumption. These actions will help identify effective and efficient pathways, cross-cutting technologies, and solutions to address mitigation and adaptation to climate change, energy needs, and mobility challenges, including actions to support the **automotive sector package**. Due to the cross-cutting character of the Clean Industrial Deal, it will be supported by the climate relevant activities of Horizon Europe, in particular **Cluster 5 Climate, Energy and Transport** as well as the Industrial part of **Cluster 4 Digital, Industry and Space**.

³ 'Open strategic autonomy' refers to the term 'strategic autonomy, while preserving an open economy', as reflected in the [Conclusions of the European Council of 1/2 October 2020](#). It is further set out in the Communication from the Commission *Trade Policy Review – An Open, Sustainable and Assertive Trade Policy*, [COM\(2021\) 66](#).

Efforts will focus on ensuring affordable, sustainable, and secure energy supplies, the shift to more sustainable mobility options and transport modes, the decarbonisation of industry and circularity in manufacturing and process industries. Research and innovation will focus on leveraging digital technologies to improve productivity and help to close the skills gap, thereby improving Europe's competitiveness.

To enhance ecosystems and biodiversity on land and in waters in line with the commitments taken in the Kunming Montreal Agreement, actions in **Cluster 6 Food, Bioeconomy, Natural Resources, Agriculture and Environment** will focus on understanding and addressing the main drivers of biodiversity loss, developing innovative methods for biodiversity protection and restoration, and helping develop new biodiversity friendly practices in agriculture, forestry and aquaculture. Cluster 6 will help protect our natural world and contribute to climate action.

With a view to protect Europe's food sovereignty and to support the competitiveness of our entire food value chain, research and innovation will support long-term competitive, resilient and sustainable farming, fisheries and aquaculture. Communities in rural, coastal and urban areas will also benefit from R&I actions in this Work Programme. Actions in Cluster 6 will support the transition to a sustainable and competitive circular economy and bioeconomy and foster bio-based innovations. They will keep on focusing on increasing water resilience, sustaining a thriving blue economy and safeguarding ocean sustainability. This will contribute to the realisation of the new EU Circular Economy Act, the revised EU Bioeconomy Strategy, the new European Water Resilience Strategy and the European Oceans Pact. It will strengthen the EU lead on ocean governance, optimise the uses of the sea, protect coastal areas against climate change and enhance knowledge of emerging scientific areas such as blue carbon.

The **European Innovation Ecosystems** work programme plays an important role in putting research and innovation at the heart of our economy. It contributes to the creation of efficient and interconnected innovation ecosystems where disruptive innovation and the diffusion of digital technologies can more easily take place.

The European Research Area (ERA) envisions a single, borderless market for research, innovation and technology across the EU based on excellent, competitive, open and talent-driven research. The part **"Widening participation and strengthening the European Research Area"** supports the priorities set out in the Pact for Research and Innovation in Europe and is the driving instrument in the implementation of the ERA Policy Agenda. It will support a broad range of actions to unlock more of the potential of the ERA by tackling fragmentation of the R&I landscape, reducing geographical disparities in R&I performance, and building R&I capacity through institutional and structural reforms. While keeping excellence as the main feature, a wide spectrum of measures in the component "Widening participation and spreading excellence" will foster participation in the work programme actions and facilitate collaborative links. The actions in the component "Reforming and enhancing the European research and innovation system" will strengthen capacities of R&I actors in multiple areas, including institutional open access publishing, reproducibility of scientific results, reforms of research assessment, knowledge valorisation, inclusiveness and gender equality, research management, research careers, programme level collaboration, and science for policy.

In addition, out of the **nine new European Partnerships**⁴ announced in the strategic plan 2025-2027, eight are launched in this work programme aiming at federating national research and innovation efforts and increasing industry participation in Horizon Europe in key strategic areas.

EU Missions address some of the greatest global challenges that affect our daily lives. They have ambitious, clear and targeted objectives that are time-bound, realistic and measurable. They are rooted in research and innovation; they will employ a portfolio approach to tackle these challenges using instruments across diverse disciplines and policy areas in a coordinated way.

With this work programme, the Commission launches an investment of more than 652 million for 2025 in EU Missions. This investment will support research and innovation, which is expected to result in, for example, better-prepared local and regional authorities to face climate-related risks, the restoration of at least 25 000 km of free-flowing rivers, Climate City Contracts with 100 cities, the roll-out of robust soil monitoring programmes, and optimise minimally invasive diagnostic cancer interventions. These actions directly support key overarching EU priorities.

The Commission invites researchers, innovators, citizens and all interested stakeholders to take part in the following five Missions:

- **Adaptation to Climate Change:** support at least 150 European regions and communities to become climate resilient by 2030;
- **Cancer:** improving the lives of more than 3 million people by 2030 through prevention, cure and for those affected by cancer including their families, to live longer and better;
- **Restore our Ocean and Waters by 2030;**
- **100 Climate neutral and smart cities by 2030;**
- **A Soil Deal for Europe:** 100 living labs and lighthouses to lead the transition towards healthy soils by 2030.

As a cross-cluster issue, the **New European Bauhaus (NEB)** will support research and innovation leveraging the power of inclusiveness, sustainability, arts and culture to advance the green transition in neighbourhoods. More specifically, it will foster research and innovative solutions connecting the green transformation, social inclusion and local democracy; circular and regenerative approaches for the built environment; and innovative funding and new business models for the transformation of neighbourhoods.

International cooperation in research and innovation plays a key role in Global Europe through building and leveraging partnerships around the world to better address EU dependencies in strategic sectors, while promoting our values and principles. It is essential for tackling global challenges more effectively and underpins all the key strategic orientations of the Horizon Europe strategic plan 2025-

⁴ The partnerships launched in this work programme are:

- Brain Health
- Forests and Forestry for a Sustainable Future
- Raw Materials for the Green and Digital Transition
- Resilient Cultural Heritage
- Innovative Materials for the EU
- Solar Photovoltaics
- Textiles of the Future
- Virtual Worlds

2027. It enables Europe to access resources, know-how, scientific excellence, value chains and markets that are developing outside the EU. All parts of the 2025 Work Programme encourage international cooperation, with particular emphasis on dedicated initiatives for cooperation with Africa, Mediterranean and Latin America and Caribbean countries.

Association of third countries to Horizon Europe is an important element in international cooperation. [Nineteen countries](#) are currently associated to the programme, paying into the Horizon Europe budget and participating under almost the same conditions as EU Member States. Association talks are on-going with several other countries. Association is politically important, economically relevant and helps drive scientific excellence. As geo-political tensions continue to rise and intensify, association provides a framework to deepen our technology cooperation with those selected allies that share our concerns and values, in line with the [European Economic Security Strategy](#).

Towards a simpler, less prescriptive and shorter work programme.

In line with the Commission's overarching priority to simplify EU rules and enhance competitiveness, several measures have been introduced aiming to streamline the 'main' work programme 2025 and improve the experience of applicants and beneficiaries which include:

- Reduced length of the work programme by reducing the overall number of topics, shortening topic descriptions and minimising single-project topics.
- Keeping topics more open by being less prescriptive, leaving more freedom to applicants for different pathways towards expected outcomes.
- Increased use of simplified cost options. In the 'main' Work Programme 2025, lump sum grants represents more than 35% of the budget. By 2027, the intention is to fund at least 50% of the calls' budget through lump sum funding, taking into account the suitability for the supported actions.
- the revision and simplification of a number of non-financial obligations (such as the approach to the 'do no significant harm' principle and the check on the robustness of AI tools), resulting in a shorter proposal form.
- The 'main' Work Programme 2025 will feature 29 topics using two-stage evaluation. These will allow applicants to submit a shorter summary proposal and only submit a full proposal if successful at the initial stage.
- Around 20 of these topics will be evaluated blindly to collect additional evidence for a sound assessment of the **blind evaluation methodology**, as a method to avoid potential risk for bias.

The Commission is committed to continue its efforts to make work programme 2026-2027 even more simple, shorter and impactful.

Investing in the green and digital transition, climate action and biodiversity

In order to support our commitment to make the **EU the world's first climate-neutral continent by 2050**, Horizon Europe will spend at least 35% of the funding available contributing to climate objectives. The commitment to spend at least 35% of resources on climate action and strengthen investments in biodiversity applies to the entirety of Horizon Europe including the European Research Council (ERC), the European Innovation Council (EIC) and Institutionalised European Partnerships. These are not included in this work programme.

Taking into account all work programmes and planning documents for Horizon Europe 2025⁵ it is estimated that overall 35% of funds will contribute to climate action and 8.8% to biodiversity related policy objectives.

Actions supported by the European Union budget shall not do harm to environmental policy objectives⁶. As announced in the strategic plan 2025-2027 a new approach to 'do no harm' assessments shall be implemented in Horizon Europe from 2025 easing the workload of applicants to reflect on environmental effects of their proposals while maintaining a screening of all published topics.

The parts of the present work programme dedicated to the six clusters of Pillar II, 'Global Challenges and European Industrial Competitiveness', research infrastructures, widening participation & strengthening the European research area, European innovation ecosystems, the EU Missions and the New European Bauhaus Facility together contribute with over € 3150 million to climate action, equal to 47.3 % of the present work programme budget. Furthermore, these parts will contribute € 860 million to biodiversity, equal to 12.9 % of the present work programme budget. Over € 285 million of the contributions to biodiversity are from the activities described in the EU Missions. The investment in climate action is a good approximation of investments in the green transition, monitoring of expenditure will provide more precise data also on other aspects like investments in 'clean air' or specific SDGs.

Contributions to climate action are made by 93.5% of resources spend⁷ by cluster 'Climate, energy, transport' (€ 1.14 billion), 64.5 % by the cluster 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' (€ 833 million), 32.5 % by the cluster 'Digital, Industry and Space' (€ 517 million), 28.3% by the cluster 'Culture, Creativity and Inclusive Society' (€ 101.8 million), and 6.3% by the cluster 'Health' (€ 50.8 million).

To ensure a contribution over 35% of the expenditure to climate objectives in the lifetime of the Horizon Europe programme, the expenditure estimates will be updated continuously. The methodology to generate these estimates is based on the 'EU-coefficients' methodology⁸.

In support of the digital transition, this work programme will foster research and innovation to make this decade **Europe's digital decade** and lay the groundwork to ensure that all actors in our society, including enterprises, master the complex interplay of technology and humankind, for a better, safer and inclusive society and life, fully respecting universal human rights and planetary boundaries. Using an EU- coefficient type calculation systems it is estimated that 40.4% of funds in the presented work programme equal to 2.7 billion, and 36 % of funds across all parts of Horizon Europe contribute to the

digital transition. The overall investment in topics that encourage the development of AI in 2025 is estimated at € 1.6 billion in 2025, this will be complemented by amounts deriving from projects that chose to develop AI-based approaches to conduct their research and innovation activities.

What you will find in this work programme

Each part of this work programme, except for this Introduction and the General Annexes, is designed around a series of coherent packages of calls for proposals and impact-driven destinations and topics.

Each **destination** describes socio-economic challenges to be addressed and the related expected impacts that R&I activities will contribute to.

In many cases, destinations correspond directly to an expected impact identified in the Horizon Europe strategic plan 2025-2027. Together, the destinations of this work programme cover the 32 expected impacts in the Horizon Europe strategic plan 2025-2027.

Under each destination, one or more **topics** describe the expected outcomes and the scope of the research and innovation activities to be supported. The **expected outcomes** are the desired effects of the project in the medium term such as the uptake, diffusion, use and/or deployment of the project's results by direct target groups. The **scope** describes the area of research/innovation that needs to be tackled if the expected outcomes are to be successfully addressed, without prescribing the method to achieve them. It is therefore up to the creativity and skill of the applicants to design a project that will generate results and substantially contribute to the expected outcomes and impacts.

Each topic also sets out the general conditions, deadlines, budget, and any specific conditions that may apply. The topics are grouped under calls for proposals, which is a technical term for a number of topics that share the deadline for the opening of the topic for submission of applications.

⁵ The Horizon Europe components European Research Council, Marie Skłodowska Curie Actions, the European Innovation Council, the European Institute of Innovation and Technology, as well as the Institutionalised European Partnerships based on Articles 185/187 TFEU and the direct actions by the Joint Research Centre have a combined budget of 12.043 billion equal to 46.81% of Horizon Europe total.

⁶ The relevant environmental policy objectives are defined in the [‘EU taxonomy regulation’](#)

⁷ To note: the work programme includes commitment to co-funded partnerships to be served by around €588 million from 2026 and 2027 budgets, of which €392 million in Cluster 6, €93 million in Cluster 1 and €68 million in ‘European Innovation Ecosystems’.

⁸ EU-coefficients are based on the internationally recognized Rio-markers methods originally developed by OECD (see further information [here](#).) The EU coefficients assigns 0-40-100% markers to actions and their budgets depending on climate action having a major impact (100%), a significant impact (40%) or a marginal impact (0%) of an activity. In this work programme the - coefficients are applied to every topic described for climate action, biodiversity, clean air, digital transition and artificial intelligence. For other parts of Horizon Europe they are applied to larger groups of actions and in general to awarded projects for expenditure monitoring and documentation. Actions can be assigned more than one coefficient if they contribute substantially to more than one of the related objectives.

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Horizon Europe
Work Programme 2025

3. Research Infrastructures

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Introduction

The Horizon Europe Programme objectives are pursued through the Research Infrastructures part endowing Europe with world-class sustainable¹ research infrastructures which are open and accessible to the best researchers from Europe and beyond. This work programme supports activities to consolidate, evolve, open, integrate and interconnect a world leading ecosystem of research services for researchers in Europe, encompassing both national and pan-European infrastructures. The aim is to cover the continuum of needs from the creation of fundamental knowledge to technology development and innovation, while supporting open science. The programme is building on continuous policy development under the European Research Area, including the strategy-led approach and roadmap exercise of the European Strategy Forum on Research Infrastructures (ESFRI) and the use of the European Research Infrastructure Consortium (ERIC) legal instrument. The programme is highly relevant to the Political Guidelines for the next European Commission 2024-2029, which highlight that “to lead on innovation, we need to create the conditions for researchers to thrive. This means providing the infrastructure and innovative laboratories they need to test and develop ideas”.

The programme aims to improve the sustainability of the research infrastructures ecosystem and synergies amongst funding sources, support human resources and skills development for an optimal functioning of research infrastructures, and reinforce the international dimension of research infrastructures in particular with regards to shared global challenges.

Another key aim of the programme is to continue enabling transnational access to research infrastructure services with two main targets:

- curiosity driven research.
- challenge-driven research (also considering the development of new or customised services, to better serve interdisciplinary approaches).

It will also promote the educational and training dimensions of access to research infrastructures while making sure these activities do not come at the cost of already overbooked transnational access services. The programme also aims at fostering the uptake of research infrastructure services in other parts of the Horizon Europe programme, in line with the Pact for R&I in Europe and the ERA Policy Agenda.

The programme promotes collaboration in the upgrading and design of scientific instruments and tools, including through cooperation with industry and through creating research infrastructure innovation ecosystems. Reduction of the environmental footprint of research infrastructures is also a focus.

In line with the Strategic R&I Agenda of the 2021-2030 European Open Science Cloud (EOSC) co-programmed European Partnership, the programme aims at ensuring that Open

¹ Sustainable refers to the overall “capacity for a research infrastructure to remain operative, effective and competitive over its expected lifetime”. This also encompasses the environmental and resources footprint dimensions.

Science policies, practices and skills become the norm across the ERA and that the EOSC federation is enlarged through connecting existing research infrastructures in Europe and providing additional value added services based on user needs, also with the view of enabling the European contribution to a web of FAIR data and services.

Finally, the further evolution of the Destination Earth flagship initiative as a digital model of the Earth on a global scale is also supported, with a strong AI component of the New Digital Twins.

The Research Infrastructures work programme is structured around the following four destinations:

INFRADEV - Consolidation and evolution of the European Research Infrastructure landscape, to develop an integrated European ecosystem of research infrastructures, including single-sited facilities, distributed facilities and networks of facilities providing joint services.

INFRAEOSC - Enabling an operational, open and FAIR EOSC ecosystem, to contribute to a web of FAIR (Findable, Accessible, Interoperable, Reusable) research data and provide a trusted and secure federated system of research data and services (EOSC Federation) for researchers in the EU and Associated Countries to store, share, process and reuse within and across disciplines and borders FAIR research outputs and tools for research, innovation and educational purposes.

INFRASERV - Research infrastructures services to support health research, accelerate the green transition and the digital transformation, and advance frontier knowledge the access to RIs, to support transnational access to state-of-the-art facilities for researchers, relevant for a large research domain or in support of societal challenge and EU priorities.

INFRATECH - Next generation of scientific instrumentation, tools, methods, and advanced digital solutions of research infrastructures and foster innovation and co-creation with industry, to support research infrastructure needs for technology development to maintain and upgrade their services and to create new ones, and to support the Destination Earth initiative.

Calls

Call - Research Infrastructures 2025

HORIZON-INFRA-2025-01

Overview of this call²

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ³	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025 Deadline(s): 18 Sep 2025				
Destination INFRADEV - Consolidation and evolution of the European Research Infrastructure landscape (2025)				
HORIZON-INFRA-2025-01-DEV-01: Training and up-skilling of research infrastructures technical staff	CSA	10.00	1.00 to 1.50	8
HORIZON-INFRA-2025-01-DEV-02: Early phase implementation of ESFRI Projects that entered the ESFRI Roadmap in 2021	CSA	16.50	1.00 to 1.50	11
HORIZON-INFRA-2025-01-DEV-03: Consolidation of the Research Infrastructure landscape – Individual support for evolution, long term sustainability and emerging needs of pan-European research infrastructures	RIA	30.00	3.00 to 4.00	8
HORIZON-INFRA-2025-01-DEV-04: Support	CSA	3.00	1.50 to 3.00	1

² The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

³ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Horizon Europe - Work Programme 2025
Research Infrastructures

to the European Strategy Forum on Research Infrastructures				
HORIZON-INFRA-2025-01-DEV-05: Preparatory actions exploring future frameworks for research infrastructures investment plans and funding streams, for integrated and sustained scheme for access and for joint technology development.	CSA	4.50	1.00 to 1.50	3
Destination INFRAEOSC - Enabling an operational, open and FAIR EOSC ecosystem (2025)				
HORIZON-INFRA-2025-01-EOSC-01: EOSC Nodes with federating capabilities for the EOSC Federation	RIA	30.00	6.00 to 8.00	4
HORIZON-INFRA-2025-01-EOSC-02: FAIR Integration for Enhanced Research Data in the EOSC ecosystem and beyond	RIA	16.00	5.00 to 8.00	2
HORIZON-INFRA-2025-01-EOSC-03: Advancing AI-readiness and Machine-Actionability in the EOSC Ecosystem	RIA	15.00	7.50 to 15.00	2
HORIZON-INFRA-2025-01-EOSC-04: Data stewards, skills and training for Open Science and FAIR practices	CSA	8.00	5.00 to 8.00	1
HORIZON-INFRA-2025-01-EOSC-05: Using Generative AI (GenAI4EU) for Scientific Research via EOSC	RIA	37.50	7.50 to 10.00	4
Destination INFRA-SERV - Research infrastructures services to support health research, accelerate the green transition and the digital transformation, and advance frontier knowledge (2025)				
HORIZON-INFRA-2025-01-SERV-01: Research infrastructure services to enable R&I addressing main challenges and EU priorities related to the health domain	RIA	30.00	Around 10.00	3
HORIZON-INFRA-2025-01-SERV-02: Research infrastructure services to enable R&I addressing main challenges and EU priorities	RIA	20.00	Around 5.00	4
HORIZON-INFRA-2025-01-SERV-03: Research infrastructure services advancing	RIA	20.00	Around 10.00	2

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frontier knowledge				
HORIZON-INFRA-2025-01-SERV-04: Research infrastructure services advancing frontier knowledge (bottom-up)	RIA	20.00	Around 5.00	5
Destination INFRA TECH - Next generation of scientific instrumentation, tools, methods, and advanced digital solutions of research infrastructures and foster innovation and co-creation with industry (2025)				
HORIZON-INFRA-2025-01-TECH-01: New technologies and solutions for reducing the environmental and climate footprint of research infrastructures	RIA	25.00	Around 5.00	5
HORIZON-INFRA-2025-01-TECH-02: Implementing research infrastructure technology roadmaps	RIA	45.00	Around 10.00	4
HORIZON-INFRA-2025-01-TECH-03: AI- powered impact simulations in support of the Destination Earth initiative	RIA	30.00	7.00 to 10.00	4
HORIZON-INFRA-2025-01-TECH-04: AI- generated digital twins for science	RIA	40.00	8.00 to 10.00	4
Overall indicative budget		400.50		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.

<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.
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DRAFT

Destinations

Destination INFRADEV - Consolidation and evolution of the European Research Infrastructure landscape (2025)

The objective of this destination is to consolidate and evolve the European research infrastructure landscape, considering notably the development of pan-European research infrastructures prioritised by ESFRI and the ERICs, and underpinning an effective and agile European Research Area. It supports actions to develop an integrated European ecosystem of research infrastructures, including single-sited facilities, distributed facilities and networks of facilities providing joint services.

The expected impact of the EU intervention on the activities supported under this destination notably includes:

- Further consolidation, evolution and optimisation of the European research infrastructure landscape, with the objective to enhance its capacity and capability to support the continuum of research and innovation needs.
- Exploring ways forward towards improved sustainability of the research infrastructure ecosystem and synergies amongst research infrastructure funding sources, considering that funding an increasing number and size of pan-European research infrastructures has a significant impact on research budgets.
- Support for human resources and skills development for an optimal functioning of research infrastructures, through continuous professional training and upskilling of staff in charge of research infrastructures, considering that highly skilled personnel play a vital role in constructing, evolving and operating research infrastructures and serving users; and thus, research infrastructures must be able to attract, up-skill, and keep specialised staff.

Proposals are invited against the following topic(s):

HORIZON-INFRA-2025-01-DEV-01: Training and up-skilling of research infrastructures technical staff

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 1.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio covering a wide range of domains, grants will be awarded to applications not only in order of ranking but at least also to those proposals that are the highest ranked within each domain, provided that the applications attain all thresholds.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁴

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

- Enhanced expertise and knowledge of technical staff working in research infrastructures, for an optimal functioning of the infrastructure.
- Enhanced mobility and career opportunities throughout Europe for technical staff, including across research infrastructure domains as well as across sectorial careers.
- ‘One-stop-shop(s)’ of training services dedicated to technical staff that meet the needs of different domains.

Scope: In research infrastructures there is the need for staff with an extraordinary blend of scientific, technical and managerial expertise. Considering that highly skilled personnel play a vital role in constructing, operating and implementing research infrastructures and serving users, research infrastructures must be able to attract, up-skill, and valorise specialised staff to exploit their full potential.

⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

This action will support structuring the offer of training activities dedicated to enhancing skills and career profiles of technical staff working in research infrastructures, as ‘one-stop shop(s)’. This would cover activities such as the development of new training programmes addressed to cover specific needs of research infrastructures, training programmes that promote mobility and career opportunities throughout Europe (for example through staff exchange) or that create training opportunities (for example through summer schools or workshops). Programmes may address the improvement of the skills of different professionals working in a single research infrastructure or in a single domain, and may also enhance horizontal key professionals across research infrastructure domains, covering identified common needs such as those related to digital aspects, research data management, Artificial Intelligence (AI) or enhanced remote access. The activities should include the promotion of existing good practices, as well as dissemination and exploitation of successful experiences to a set of relevant stakeholders.

Individual proposals should focus on one specific domain⁵ (or sub-domain for the largest ones) as defined by ESFRI but should allocate efforts to contribute to gathering programmes under an overarching training service or entry point across domains to facilitate correlation between training supply and demand and to harmonise and optimise the training services offered. This requires dedicated activities for collaboration with other projects under this topic and, where appropriate, common entry portal or cross-references among portals. Proposals should explicitly state which domain (and sub-domain, where applicable) they are addressing.

To ensure consolidation and evolution of the European research infrastructure landscape, considering notably the development of pan-European research infrastructures prioritised by ESFRI and the ERICs, proposals should include at least one ESFRI Landmark⁶ or European Research Infrastructure Consortium (ERIC)⁷ as beneficiary. In case of a distributed⁸ ERIC, as an alternative to the ERIC participating as a beneficiary, a legal entity that is hosting ERIC facilities, resources or related services may participate as a beneficiary. A declaration signed by the legal representative of the ERIC should confirm that the ERIC is supporting this participation, explain the relevance for the ERIC and describe any further cooperation with the ERIC.

Considering past or ongoing actions identifying training needs is encouraged as well as exploring collaboration with relevant training projects e.g. Marie Skłodowska-Curie Actions with a research infrastructure dimension. Projects may also build on the past activities and experience gained in projects such as [RItrainPlus](#) (Research Infrastructure Training Plus).

Proposals could consider the inclusion of the European Commission's Joint Research Centre (JRC) Support Services Directorate in their research infrastructure portfolio. The JRC offers

⁵ ESFRI domains: 1. Data, Computing and Digital Research Infrastructures; 2. Energy; 3. Environment; 4. Health & Food; 5. Physical Sciences and Engineering; 6. Social Sciences & Humanities. See ESFRI Landscape Analysis 2024 <https://landscape2024.esfri.eu/>.

⁶ See lists of ESFRI 'Landmarks' in the 2021 ESFRI Roadmap on <https://roadmap2021.esfri.eu/>

⁷ [European Research Infrastructure Consortium \(ERIC\) | European Commission \(europa.eu\)](#)

⁸ The term ‘distributed’ research infrastructure typically refers to one or a few central hubs and several interlinked (national or institutional) nodes where many components of the research infrastructure may not be part of the same legal entity, the ERIC.

its experience in assessing, setting the strategy, maintaining, operating and providing access to external researchers to its research infrastructures in various fields of science. The JRC runs a specific programme that opens its research infrastructure for access to external users for the purposes of training and capacity building, where researchers are trained on the capabilities and use of our experimental equipment. In this regard, the JRC will consider collaborating with any successful proposal.

HORIZON-INFRA-2025-01-DEV-02: Early phase implementation of ESFRI Projects that entered the ESFRI Roadmap in 2021

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 1.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If eligible for funding, legal entities established in non-associated third countries may exceptionally participate in this Coordination and support action as a beneficiary or affiliated entity.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced coverage of the targeted ESFRI Projects, grants will be awarded to applications not only in order of ranking but at least also to those proposals that are the highest ranked for each targeted ESFRI Project, provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the</p>

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁹
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Expected Outcome: Project results are expected to contribute to several of the following expected outcomes:

- Faster and larger implementation of the ESFRI Projects that entered the ESFRI Roadmap in 2021;
- enhanced ERA excellence and attractiveness through the availability of additional capacities from the targeted ESFRI Projects;
- solid Member States/Associated Country engagement in pan-European research infrastructures, leading to their full implementation;
- long-term perspective for investments in research infrastructures;
- synergies and complementarities between new and existing research infrastructures.

Scope: This topic targets the research infrastructure projects that entered the ESFRI Roadmap in 2021¹⁰, due to their scientific excellence and organisational maturity as well as to their strategic importance for the European Research Area and the structuring of the European research infrastructure ecosystem. Proposals must explicitly state which ESFRI Project they target.

Although these ESFRI Projects have received EU funding for their preparatory phase and initial commitment from Member States/Associated Countries, the early stages of the research infrastructure life cycle are particularly challenging. Past monitoring exercises on ESFRI infrastructures highlighted recurrent bottlenecks hampering their full implementation and start of operation phase. Building on such experiences, proposals are expected to identify and address the most critical issues that could prevent or delay the entering of these ESFRI Projects into the implementation phase.

Support can be provided for activities, such as enlargement of the membership; establishment of the governance structure and legal entity; securing the funding; finalisation of the distributed architecture; development of ICT and data management solutions (including data management according to the FAIR principles and possible open access to data); development of access policies and users' strategies; consolidation of the international dimension; consolidation of the service offer; assessing possible expansion to new user communities/new needs; or addressing staff and procurement related issues. Proposals should focus on the activities addressing the identified bottlenecks.

⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁰ ESFRI Projects eligible for support under this topic are: EBRAINS, SLICES, SoBigData++, MARINER-I, EIRENE RI, ET, EuPRAXIA, GGP, GUIDE, OPERAS, RESILIENCE.

Proposals should involve all stakeholders necessary to move the project forward and ensure financial commitments (including national/regional ministries/governments, research councils or funding agencies).

Proposals should explain any synergies and complementarities with previous or current EU grants.

HORIZON-INFRA-2025-01-DEV-03: Consolidation of the Research Infrastructure landscape – Individual support for evolution, long term sustainability and emerging needs of pan-European research infrastructures

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <p>Due to the scope of this topic, proposals must include at least one of the ESFRI Landmarks¹¹ or European Research Infrastructures Consortia (ERICs)¹² as beneficiary. Such research infrastructure(s), and the beneficiaries that own/operate them, must be explicitly identified in the proposal. For distributed ERIC the ERIC must be the beneficiary.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>The funding rate is 80% of the eligible costs.</p>

Expected Outcome: Project results are expected to contribute to several of the following expected outcomes:

- better structured and strengthened European Research Infrastructure (RI) landscape;

¹¹ See the list of ESFRI 'Landmarks' in the 2021 ESFRI Roadmap on <https://roadmap2021.esfri.eu/>
¹² [European Research Infrastructure Consortium \(ERIC\) | European Commission \(europa.eu\)](https://roadmap2021.esfri.eu/)

- new services available to a wider user community, including participants in other parts of Horizon Europe, allowing to better tackle scientific and societal challenges;
- increased capacity to address EU policy priorities and/or socio-economic challenges;
- reinforced global competitiveness of the European Research Area;
- reduction of environmental (including climate-related) impacts as well as optimisation of resource and energy consumption integrated through the full life cycle of research infrastructures;
- increased long-term sustainability of European research infrastructures.

Scope: This topic targets the consolidation of the EU research infrastructures landscape through the support, together with the countries, that are members of the research infrastructures, to the strengthening, long-term sustainability, reorientation or evolution of ESFRI Landmarks or European Research Infrastructure Consortia (ERICs).

Proposed action should justify the specific objectives and focus on activities that are critical for the sustainability and optimised use of the ESFRI Landmarks or ERICs, such as activities aiming at several of the following objectives:

- enlargement of the membership or broadening of the base of participating countries;
- reinforcing international cooperation;
- revision of business/funding plan;
- development of managerial and technical skills for RI staff;
- structuring and strengthening of national nodes;
- extension of remote and/or virtual access;
- management of research data according to the FAIR principles;
- reorientation or evolution of the RI scope;
- addressing critical aspects raised following an assessment or monitoring exercise, e.g. in the context of ESFRI activities;
- Development, update and or implementation of impact assessment of the RI.

In case of reorientation or evolution of the research infrastructure scope, activities should fill gaps in the research infrastructures landscape¹³, enabling the research infrastructure to address

¹³ Although the action aims at individual support to a pan-European research infrastructure, applicants should consider the ESFRI Landscape Analysis and liaise during the action with other relevant ESFRI/ERICs to ensure complementarity.

new research or societal challenges and/or serve new user communities, increasing and improving service capacity and/or integrating new resources/facilities.

Due attention must be given to related EU initiatives and priorities and, when relevant, to complementarity and relevance to activities in other parts of Horizon Europe. Proposals should explain any synergies with previous or current EU grants.

Given the funding rate, proposals should ensure a minimum adequate backing by the beneficiaries, who should provide the remaining share for the activities covered by the Grant Agreement and foster the sustainability of the ESFRI Landmark or ERIC.

Specific attention should be given, where relevant, to the greening of technologies and methodologies used by the research infrastructure, to the interaction with industry/SMEs, to the fostering of the innovation potential of the infrastructures, and to their integration into local, regional and global innovation ecosystems.

HORIZON-INFRA-2025-01-DEV-04: Support to the European Strategy Forum on Research Infrastructures

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.50 and 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: The granting authority can fund a maximum of one project.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁴ .
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- enhanced efficiency, impact and visibility of ESFRI strategy and actions;
- better structured and strengthened European research infrastructure ecosystem;
- reinforced global competitiveness of the European Research Area;
- coordination and alignment of EU and national priorities for research infrastructures;
- impact assessment of ESFRI.

Scope: The European Strategy Forum on Research Infrastructures (ESFRI) brings together policy makers, funding bodies, and the scientific community to identify joint investment priorities for pan-European research infrastructures as well as to foster their implementation, sustainability and impact. A comprehensive and efficient support structure is essential for the effective execution of ESFRI's tasks and activities.

In this respect, the project should provide administrative support to the ESFRI Chair and the ESFRI Executive Board, and in particular, it should support ESFRI, the ESFRI working groups and other ESFRI bodies in carrying out all of the following activities:

- development and publishing of the ESFRI Roadmap and Landscape Analysis;
- effective evaluation of new ESFRI Roadmap applications and ESFRI project monitoring after 2026, using also external expertise;
- strengthening ESFRI's analytical capacity, including through the use of external expertise in support of ESFRI policy and the ESFRI Roadmap processes;
- effective evaluation and monitoring of research infrastructures on the ESFRI Roadmap through appropriate ICT and analytical tools, using also external expertise;
- development and implementation of the ESFRI communication and outreach strategy, including organisation of ESFRI-led conferences and outreach events;
- fostering cooperation, exchange of experiences and good practices between the research infrastructures, their managers and stakeholders, as well as the funding bodies, including managing authorities of Cohesion policy programmes and policy makers;

¹⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- ensuring cooperation of ESFRI with ERA related groups and initiatives, with the EOSC initiative as well as with any other relevant initiatives, bodies and stakeholders at European or international level, including via the ESFRI Stakeholder Forum;
- calling on third party/ies to carry out an impact assessment of ESFRI taking account of suitable indicators proposed by ESFRI.

The project should organise its workplan in a sufficiently flexible way so as to be able to adapt to changing support needs of ESFRI. A mechanism with ESFRI should be foreseen to ensure optimal adaptation to ESFRI's needs over the course of the project.

All software developed under this destination should be open source, licensed under a CC0 public domain dedication or under an open source licence as recommended by the Free Software Foundation¹⁵ and the Open Source Initiative¹⁶.

Proposals could consider the inclusion of the European Commission's Joint Research Centre (JRC) Support Services Directorate in their research infrastructure portfolio. The JRC offers its experience in assessing, setting the strategy, maintaining, operating and providing access to external researchers to its research infrastructures in various fields of science. The JRC is an ESFRI stakeholder and collaborates with several ESFRI/ERIC consortia as an associated partner. In this regard, the JRC will consider collaborating with any successful proposal.

HORIZON-INFRA-2025-01-DEV-05: Preparatory actions exploring future frameworks for research infrastructures investment plans and funding streams, for integrated and sustained scheme for access and for joint technology development.

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 1.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Procedure</i>	The procedure is described in General Annex F. The following

¹⁵ <https://www.gnu.org/licenses/license-list#SoftwareLicenses>

¹⁶ <https://opensource.org/licenses>

	exceptions apply: To ensure a balanced portfolio covering the different areas, grants will be awarded to applications not only in order of ranking but at least also to those proposals that are the highest ranked within each area, provided that the applications attain all thresholds.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁷ .

Expected Outcome: For all areas: research infrastructures, their stakeholders and funders have more robust knowledge to develop strategies, coordinate and align future actions in support of an effective ecosystem of cutting-edge European research infrastructures. Project results are expected to contribute to all of the following expected outcomes for one of the areas:

Area 1: Strengthening research infrastructures investment plans and diversifying funding streams

- Research infrastructure managers benefit from an overview of funding sources at national, regional and EU level.
- Research infrastructure managers and funders are better prepared to develop synergies among complementary funding instruments that fit their specific needs and objectives.
- Funders have a better picture of the financial impact of the priorities and strategies around research infrastructures, covering both day-to-day operations and long-term investments.

Area 2: Preparatory action to explore a more integrated and sustainable scheme for access to research infrastructures

- Proposal for a new EU access scheme addressed to Research Infrastructure stakeholders (research infrastructures funders, research infrastructures managers, research infrastructures user communities), ensuring effective, flexible and seamless access to world-class scientific services and resources in all science and technology fields, accommodating the diverse nature of research infrastructures and their evolving needs, and overcoming the and disruptive effects of an approach based on short-term projects.

¹⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Analysis of how research infrastructures user communities, including from Widening countries, will benefit from a new EU access scheme that enable wider, simplified and more efficient access so as to boost breakthrough and leading-edge research.
- Better understanding by research infrastructure stakeholders of the governance options, funding and implementation aspects of a future access scheme.

Area 3: Framework for joint research infrastructure technology developments

- Research infrastructures benefit from a more stable framework for joint technology developments avoiding duplication, promoting pooling of resources and appropriate support mechanism.
- Research infrastructure innovation ecosystems are further developed, and their overlaps are identified. They underpin the technology developments needed by research infrastructures including the implementation of research infrastructure technology roadmaps.
- A virtuous circle for early involvement of industry, including SMEs, and development or update of joint research infrastructure technology roadmaps is created.
- Mechanisms to ensure the openness of research infrastructure technology innovation ecosystems, which must be able to integrate new EU players.

Scope: Proposals should address only one of the following areas and should explicitly state which area they address:

Area 1: Strengthening research infrastructures investment plans and diversifying funding streams

The European Strategy Forum on Research Infrastructures (ESFRI), through successive roadmaps, has identified European priorities to equip researchers and innovators in Europe with infrastructures for groundbreaking research in all science and technology fields, from fundamental research to technological developments, to addressing pressing challenges of our society.

EU funding has been instrumental with recurrent support to the different phases of the research infrastructure life cycle, from concept and design to preparation and implementation, as well as in integrating and interconnecting new research infrastructure capacities in the European landscape and opening for access to them, overcoming the limits of national research programmes. When appropriate, pan-European research infrastructures have also benefitted from complementary EU funding, such as structural and investments funds or the Recovery and Resilience Facility funds.

However, funding an increasing number and size of pan-European research infrastructures weighs on national research budgets, raising the question of their long-term sustainability and of EU programmes' contribution to the various stages of their life cycle. At the same time, the

Pact for R&I in Europe¹⁸ calls for more concerted investments and further synergies between Union, national and regional funding programmes. The Pact also calls for employing a broader range of funding sources for world-leading research infrastructures and exploring novel ways of funding transnational and virtual access.

Yet, recent ESFRI surveys show the difficulty to capture exhaustive information on the funding streams and level of funding. In many countries, the funding landscape is very complex with multiple funding instruments not always tracking research infrastructures along the final beneficiaries. Similarly, details of non-research EU funding benefitting research infrastructures are not always clear. From the research infrastructures' perspectives, many distributed research infrastructures lack long-term planning and do not have an overview of national funding sources nor expenses of the nodes, including access costs. This lack of visibility is hampering strategic discussions on investments plans and on broader access to research infrastructures.

Taking stock of relevant information sources such as the ESFRI work on funding¹⁹, guides for synergies²⁰, documented examples from research infrastructures, and funders or financial organisms such as the EIB, the action should cover the following aspects:

- Mapping of main funding sources used for the preparation, construction and operation of ESFRI Projects and Landmarks, ERICs and other world-class European research infrastructures.
- Identification of established or potential synergies across funding sources and different financial instruments (including loans), at national/regional and EU level such as EIB funding instruments, structural and investment funds, Recovery and Resilience Facility funds, and funds under the Neighbourhood, Development and International Cooperation Instrument.
- Better understanding of the specific costs and challenges in financing different phases of the research infrastructures life cycle such as construction, operation and necessary upgrades to address greening and digitalisation challenges.
- Case studies of distributed research infrastructures on different approaches in identifying the nature and level of costs and best practices for long-term planning.

Proposals should foresee possible cooperation with projects selected under Area 2 with regards to funding models for access.

Area 2: Preparatory action to explore a more integrated and sustainable scheme for access to research infrastructures

¹⁸ [Council Recommendation \(EU\) 2021/2122 of 26 November 2021 on a Pact for Research and Innovation in Europe](#)

¹⁹ ESFRI Report: Funding of Research Infrastructures <https://www.esfri.eu/esfri-report-funding-research-infrastructures>.

²⁰ E.g. COMMISSION NOTICE Synergies between Horizon Europe and ERDF programmes 2022/C 421/03 [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022XC1104\(02\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022XC1104(02))

The support under Horizon Europe and past EU Framework Programmes for transnational and virtual access to research infrastructures has opened up world-class services and resources across Europe to research communities for their scientific activities, in all science and technology fields. It has helped the structuring of research infrastructures and their communities in organised networks, promoting single entry-points for access to facilities and resources including digital ones, and expanding to new pan-European research infrastructures.

Recent Horizon Europe support promoted further integration to better address users' needs, either around R&I areas to address societal challenges or around large scientific domains, increasing awareness in broader user communities and creating further opportunities for cross-domain R&I. However, the complexity of setting up appropriate project consortia and new access schemes coupled with the short duration projects necessitates a more integrated and sustainable approach.

The action will identify novel approaches and operational steps towards a longer-term, cross-domain integrated access scheme, promoting the vision of a 'one-stop-shop' for access to research infrastructures, their services and resources. It will build on the experience of past and ongoing EU supported access projects (notably under Horizon 2020 INFRAIA and Horizon Europe INFRASERV calls), on best practices from national access schemes, considering position papers from research infrastructures and scientific communities, and related ESFRI work.

Funding bodies, research infrastructure managers and user communities, including from Widening countries, should be involved in the design and governance of the proposed new EU access scheme, building up trust and creating opportunity to ensure a smooth implementation.

The proposal should be representative of all large scientific domains. It should involve EU research infrastructures in different fields, including preferably at least one ESFRI infrastructure²¹ and/or ERIC²² in each of the large ESFRI scientific domains as beneficiary. The action should also ensure a role for representatives of national research infrastructure funders (e.g. as a project consultative committee or advisory board) and appropriate consultation of scientific communities and potential users including from industry and public authorities.

The action will identify all necessary aspects to be addressed and possible options towards implementation. This should notably include options for:

- Governance of the access scheme, advisory bodies (such as scientific boards and users' representatives);
- Funding models, underpinned by an initial core EU funding complemented by other funding streams (institutional, national);

²¹ See the list of ESFRI 'Landmarks' in the 2021 ESFRI Roadmap: <https://roadmap2021.esfri.eu/>
²² [European Research Infrastructure Consortium \(ERIC\) | European Commission \(europa.eu\)](#)

- Access policies including mechanisms ensuring appropriate balance among large domains, scientific fields and techniques best addressing key scientific challenges and the needs of users.

While the access scheme should be driven mainly by the excellence criterion, consideration should be given to incorporating services customised or developed in other projects to address specific EU priorities and societal challenges, as well as offering specific access conditions to targeted user groups, including fast track access e.g. for emergency cases.

The proposed action is expected to deliver on all the following points:

- Concept for a new EU access scheme aiming at wider, simplified, seamless and more efficient access for researchers, including from Widening countries, to the best research infrastructures available.
- Scenarios for governance, co-funding and implementation of the access scheme.
- Promoting breakthrough and leading-edge research enabled by advanced research infrastructure services made available to a wider user community, while ensuring sustainability of the research infrastructures themselves (including by increasing their visibility and attractiveness, and creating incentives for expanding their membership).
- Recommendations on access policies, adopting the principles of the European Charter on Access to Research Infrastructures.
- Good practices on access call conditions, agreements between research infrastructures and selected users, access modalities, selection of users, support to users.
- Proposals for design of possible pilot(s) to be implemented under Horizon Europe calls for improved and harmonised RI services and broader use of RI resources, e.g. in specific domains.
- Outline of a communication plan and key components for a single-entry point portal including opportunities under complementary national or institutional access schemes.

Proposals should foresee possible cooperation with projects selected under Area 1 with regards to funding models for access.

Proposals could consider the inclusion of the European Commission's Joint Research Centre (JRC) Support Services Directorate in their research infrastructure portfolio. The JRC offers its experience in assessing, setting the strategy, maintaining, operating and providing access to external researchers to its research infrastructures in various fields of science. The JRC runs a specific programme that opens its research infrastructure for access to external users and has developed a framework for access to its research infrastructures based on the European charter of access to research infrastructures. In this regard, the JRC will consider collaborating with any successful proposal.

Area 3: Framework for joint research infrastructure technology developments

Europe's long term scientific ambitions rely on the availability of world-class research infrastructures. These infrastructures require a continuous effort of optimisation and upgrading. Identifying and developing technology building blocks that can be used by a multitude of research infrastructure communities and across different domains can help increasing the efficiency of public investments in upgrades and optimisations of research infrastructures. Such efficiency gains can be further increased with standardisation and interoperability efforts and the identification of overlaps between different domain-specific ecosystems. Further development efforts rely on functioning innovation ecosystems for research infrastructure technologies, involving infrastructure operators, users, and industry, including SMEs and key other relevant stakeholders. Ensuring the functional capacity of such ecosystems as well as its resilience against disruptions require the creation of a more integrated and long-term planning and implementation of joint technology research.

Research infrastructure technologies are also understood to cover, where applicable, areas such as sample environments, support facilities, and software.

To ensure consolidation and evolution of the European research infrastructure landscape, considering notably the development of pan-European research infrastructures prioritised by ESFRI and the ERICs, proposals should include at least two different research infrastructures as beneficiaries²³ each of them being an ESFRI Landmark²⁴ a European Research Infrastructure Consortium²⁵ (ERIC) or another research infrastructure that is an international European research organisation²⁶. Such research infrastructures, and where applicable the beneficiaries that own/operate them, must be explicitly identified in the proposals. In case of a distributed²⁷ ERIC, as an alternative to the ERIC participating as a beneficiary, a legal entity that is hosting ERIC facilities, resources or related services may participate as a beneficiary. A declaration signed by the legal representative of the ERIC should confirm that the ERIC is supporting this participation, explain the relevance for the ERIC and describe any further cooperation with the ERIC.

To ensure buy-in of the different scientific communities, the action will involve research infrastructures, covering a maximum of ESFRI domains, and, where relevant, user organisations and key industry and SME players. The consortium itself should consist of key research infrastructures that are representative of at least two ESFRI domains. While it is expected that the consortium includes research infrastructures representative of the different ESFRI domains covered, involvement of additional research infrastructures can be shown via engagement letters or other forms of endorsement.

²³ The participation of two nodes of the same ESFRI infrastructure or ERIC does not count as two different research infrastructures.

²⁴ See the list of ESFRI 'Landmarks' in the 2021 ESFRI Roadmap: [https://roadmap2021.esfri.eu/European_Research_Infrastructure_Consortium_\(ERIC\)_|_European_Commission_\(europa.eu\)](https://roadmap2021.esfri.eu/European_Research_Infrastructure_Consortium_(ERIC)_|_European_Commission_(europa.eu))

²⁵ An 'international European research organisation' means an international organisation, the majority of whose members are Member States or associated countries, whose principal objective is to promote scientific and technological cooperation in Europe.

²⁶ The term 'distributed' research infrastructure typically refers to one or a few central hubs and several interlinked (national or institutional) nodes where many components of the research infrastructure may not be part of the same legal entity, the ERIC.

The project should build on previous roadmapping and synergy efforts made by scientific communities and on projects such as the ones funded under Horizon 2020 INFRAINNOV-04-2020.

The project should address all of the following aspects:

- Identification of technology overlaps or building blocks relevant for multiple domains and infrastructure types.
- Identification of further technology roadmapping needs, covering both transversal needs and domain-specific needs.
- Identification of standardisation and interoperability needs.
- Identification of possible training and coordination needs, from technical to management staff.
- Exploration of funding mechanisms, best adapted to the needs of different research infrastructure technology innovation ecosystems.
- Identification of optimal interaction modes between research infrastructures and industry, including SMEs, depending on the research infrastructure technology innovation ecosystem.

Destination INFRAEOSC - Enabling an operational, open and FAIR EOSC ecosystem (2025)

This destination serves the European Open Science Cloud (EOSC) ambition of contributing to a web of FAIR (Findable, Accessible, Interoperable, Reusable) research data and providing a trusted and secure federated system of research data and services (EOSC Federation) for researchers in the EU and Associated Countries to store, share, process and reuse within and across disciplines and borders FAIR research outputs and tools for research, innovation and educational purposes.

The expected impacts of the activities supported under this destination are in line with objectives of the co-programmed European Partnership for EOSC and its Strategic R&I Agenda, in particular:

- Enable the definition of standards, and the development of tools and services, to allow researchers to find, access, reuse and combine results;
- Establish a sustainable and federated infrastructure enabling open sharing of scientific results;
- Ensure that Open Science practices and skills are rewarded and taught, becoming the norm across the European Research Area.

Activities should continue to transform the research landscape in Europe by bringing cohesion and addressing common needs of the research communities. The programme should catalyse a fully operational environment covering the whole research data lifecycle across borders and communities.

To further advance this ambition, the EU must continue investing in dedicated activities and ensure synergies between EOSC-related actions at the EU, national, institutional and community levels.

All software developed under this destination should be open source, licensed under a CC0 public domain dedication or under an open source licence as recommended by the Free Software Foundation²⁸ and the Open Source Initiative²⁹.

All projects financed under this destination are expected to participate in concertation activities in the framework of the EOSC Partnership.

Proposals are invited against the following topic(s):

HORIZON-INFRA-2025-01-EOSC-01: EOSC Nodes with federating capabilities for the EOSC Federation

Call: Research Infrastructures 2025
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²⁸ <https://www.gnu.org/licenses/license-list#SoftwareLicenses>

²⁹ <https://opensource.org/licenses>

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Subject to restrictions for the protection of European communication networks.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B.
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The following additions to the general award criteria apply: The extent to which the proposed work incorporates the necessary coordination efforts and resources with other relevant projects and the EOSC governance structure in the context of the EOSC Partnership will be taken into account for Impact.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p> <p>Beneficiaries will be subject to the following additional access rights:</p> <ul style="list-style-type: none"> • Each beneficiary must grant royalty-free access to its results to the EOSC Association for monitoring and developing policies and strategies for the European Open Science Cloud. Each beneficiary must also provide directly to the EOSC Association the information the beneficiary deems necessary for monitoring and developing policies and strategies for the EOSC. • Each beneficiary must grant royalty-free access to its intellectual property rights which are part of the results and are needed for further developing the EOSC to legal entities identified by the granting authority and established in Member States or countries associated to the Horizon Europe Framework Programme. Such

	<p>access rights are limited to non- commercial use.</p> <p>Beneficiaries must deposit the digital research data generated in the action in a trusted repository federated in the EOSC in compliance with EOSC requirements.</p>
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Expected Outcome: Project results are expected to contribute to the following outcomes:

- The EOSC federation will be established as a distributed system of systems, comprising of independently managed EOSC nodes that collaborate to augment their contribution to EOSC users whilst ensuring resilience of the interconnected systems by supporting the common federating capabilities.
- Researchers will benefit from unified support aimed at integrating their research environments with the EOSC federation and this coordinated assistance will streamline the alignment of research practices with the EOSC ecosystem.

Scope: The call aims to further develop the cross-domain EOSC system of systems, building upon the results of the previous INFRAEOSC calls³⁰. The focus is on developing and expanding the EOSC federation through a network of nodes as baseline elements of the federation model. These EOSC nodes will establish a set of essential federating capabilities, compatible with the EOSC EU Node reference architecture, following the EOSC Federation Handbook and EOSC interoperability framework. They should have a clearly described identity and offer unique value to EOSC users, for example representing a specific thematic domain (e.g. data or computing) or geographical area amongst the Horizon Europe participating and associated countries.

To become an EOSC node, the proposals are expected to demonstrate the ability to assess and address the existing gaps regarding the federating capabilities at technical, legal and organisational level. The proposals are expected to indicate adherence to the EOSC governance structure, federation policies and capabilities. They should also address business models, service management procedures, and technical and semantic interoperability. Furthermore, the proposals should propose a credible plan to ensure the sustainability of the proposed solutions beyond the project lifespan, including how to take over or replicate the federating role currently ensured by the EOSC EU Node³¹.

More specifically, the proposals should focus on all of the following aspects:

³⁰ https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-3-research-infrastructures_horizon-2021-2022_en.pdf;

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2023-2024/wp-3-research-infrastructures_horizon-2023-2024_en.pdf

³¹ <https://open-science-cloud.ec.europa.eu/>. Financial support for third-parties (FSTP), that will make value-added data, tools and services ready to be onboarded and available via the node, can be included in the proposals. The FSTP budget will only cover the cost of onboarding.

- Satisfy the minimal node requirements as defined by the EOSC tripartite governance³², and go beyond them by further development and refinement of the harmonized participation model, taking into account the variety of thematic and national dimensions in the EOSC federation. These requirements include: ³³;
 - o Compliance with the requirements on the legal status of the organisation;
 - o Compliance with the requirements aiming at large-scale, quality service provisioning;
 - o Capacity to onboard third-party services
- Capacity to contribute to and/or take-over the EOSC federating capabilities;
- Adoption and integration of the EOSC federation rules and policies, and further refinement and practical adaptation of best practices;
- Support to effectively monitor and report the activities of the services provided.
- Integrate and offer EOSC core federating capabilities pioneered by the EOSC EU Node, such as Authentication, Authorisation and Accounting, Research Catalogues and Knowledge Graph, Application Workflows, Monitoring and Helpdesk
- Contribute to a robust and coordinated strategy for evolving and sustaining the federated governance model for EOSC by fostering effective collaboration and coordination among the other node operators offering federating capabilities. This can be done for example by distributing the work and taking a share in facilitating the identification, selection and integration/enrolment of other organisations interested in becoming responsible for operating an EOSC node and representing various countries, regions and scientific disciplines.
- Enrich the existing guidelines and best practices for the onboarding and enrolment processes.
- Evolve and refine the EOSC federation specifications to drive the evolution across governance, operations, sustainability and technical interoperability.
- Designate and train the EOSC node operators, especially those offering federating capabilities, for high level of responsibilities within the EOSC federation.
- Develop and run community engagement and support programmes around the EOSC nodes and the surrounding ecosystem.

³² https://eosc.eu/wp-content/uploads/2024/05/EOSC-A_GA8_20240527-28_Paper-G_Update_EOSC_Nodes_requirements-DRAFT-v240524.pdf

³³ Financial support for third-parties (FSTP), that will make value-added data, tools and services ready to be onboarded and available via the node, can be included in the proposals. The FSTP budget will only cover the cost of onboarding.

HORIZON-INFRA-2025-01-EOSC-02: FAIR Integration for Enhanced Research Data in the EOSC ecosystem and beyond

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The following additions to the general award criteria apply: The extent to which the proposed work incorporates the necessary coordination efforts and resources with other relevant projects and the EOSC governance structure in the context of the EOSC Partnership will be taken into account for Impact.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries will be subject to the following additional access rights: Each beneficiary must grant royalty-free access to its results to the EOSC Association for monitoring and developing policies and strategies for the EOSC. Each beneficiary must also provide directly to the EOSC Association the information the beneficiary deems necessary for monitoring and developing policies and strategies for the EOSC.</p> <p>Beneficiaries must deposit the digital research data generated in the action in a trusted repository federated in the EOSC in compliance with EOSC requirements.</p>

Expected Outcome: Projects are expected to contribute to all of the following expected outcomes:

- improved findability, accessibility, interoperability and re-usability (“FAIRness”) of research data and other digital research outputs;
- wider uptake of and compliance with FAIR data principles and practices by national and European research data and metadata providers, repositories and databases;

- operationalisation of the concept of FAIR digital objects throughout the entire research data lifecycle;
- enhanced and mainstreamed technical specifications for FAIR digital objects to facilitate the creation of digital objects that are FAIR-by-design.

Scope: The scope of this call topic is centred on advancing the interoperability and integration of research data within the European Open Science Cloud (EOSC), in alignment with the broader context of the Common European Data Spaces and cross-sector collaboration. FAIR digital objects provide a conceptual and implementation framework to develop scalable cross-disciplinary capabilities, deal with the increasing data volumes and their inherent complexity, build tools that help to increase trust in data, create mechanisms to efficiently operate in the domain of scientific assertions, and promote data interoperability. Proposals should cover all of the following areas and activities:

- FAIR-by-Design digital objects creation: the development of tools that enable the creation of digital objects adhering to the FAIR (Findable, Accessible, Interoperable, Reusable) principles both from the “source” or as a result of an analysis.
- Automated standardisation and data quality assessment: development and provision of automated tools and procedures for standardisation and data quality assessment. This will ensure that data across different domains adhere to common standards, fostering greater compatibility and enhancing overall data quality.
- Operational data services specification: delivering technical specifications for operational data services that support the transformation of digital objects into FAIR entities. Such services may include the integration of AI-based tools capable of autonomously operating on data repositories, contributing to the automatic establishment of FAIR practices throughout the research ecosystem.
- Interoperability and training to promote the uptake of open standards: the action should make substantial contributions to the development, upkeep and widespread adoption of open standards for metadata, formats, vocabularies, semantics and APIs. Activities should foster compatibility among digital objects across different domains, facilitating seamless data exchange and integration. Training and dissemination activities will facilitate the uptake of these standards, fostering collaboration and compatibility.
- Collaboration and alignment with Common European Data Spaces: harmonisation of EOSC technical specifications with those of other Common European Data Spaces.
- Interoperability demonstration and content integration: demonstrating the tangible outcomes of applying FAIR tools, standards, and specifications will showcase the achieved interoperability and integration, strengthening the case for data sharing and reuse across disciplines and sectors.
- Cross-Sector data utilization: by enhancing content integration from data spaces, industry, and beyond, the reuse of science data in various sectors is to be encouraged.

This will ease access to real-life data from other data spaces, fostering its utilization in research and expanding its impact.

These activities will have to be developed in accordance with standards and guidelines defined or adopted by EOSC, promoting data quality and open access practices. To ensure complementarity of outcomes, proposals are expected to cooperate and align with activities of the EOSC Partnership and to coordinate with relevant initiatives and projects contributing to the development of EOSC, including projects funded by the call topics HORIZON-INFRA-2023-EOSC-01-04 - ‘Next generation services for operational and sustainable EOSC Core Infrastructure’ and HORIZON-INFRA-2024-EOSC-01-05 - ‘Innovative and customizable services for EOSC Exchange’. In addition, cooperation is expected with project(s) funded by the call topic HORIZON-INFRA-2025-01-EOSC-01. Finally, proposals should build on the work delivered by the projects FAIR-IMPACT and FAIRCORE4EOSC, especially in the areas of interoperability across disciplines and sectors, as well as in the mainstreaming of creating FAIR-by-Design digital objects. This topic implements the co-programmed European Partnership for the European Open Science Cloud.

HORIZON-INFRA-2025-01-EOSC-03: Advancing AI-readiness and Machine-Actionability in the EOSC Ecosystem

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 7.50 and 15.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Subject to restrictions for the protection of European communication networks.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 4 and achieve TRL up to 6 by the end of the project – see General Annex B.
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The following additions to the general award criteria apply: The extent</p>

	to which the proposed work incorporates the necessary coordination efforts and resources with other relevant projects and the EOSC governance structure in the context of the EOSC Partnership will be taken into account for Impact.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries will be subject to the following additional access rights:</p> <ul style="list-style-type: none"> • Each beneficiary must grant royalty-free access to its results to the EOSC Association for monitoring and developing policies and strategies for the European Open Science Cloud. Each beneficiary must also provide directly to the EOSC Association the information the beneficiary deems necessary for monitoring and developing policies and strategies for the European Open Science Cloud. • Each beneficiary must grant royalty-free access to its intellectual property rights which are part of the results and are needed for further developing the European Open Science Cloud to legal entities identified by the granting authority and established in Member States or countries associated to the Horizon Europe Framework Programme. Such access rights are limited to non-commercial use. <p>Beneficiaries must deposit the digital research data generated in the action in a trusted repository federated in the European Open Science Cloud (EOSC) in compliance with EOSC requirements.</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).³⁴.</p> <p>Grants awarded under this topic will be linked through collaboration agreements to the grants from the following action:</p> <p>HORIZON-INFRA-2025-01-EOSC-05: Using Generative AI (GenAI4EU) for Scientific Research via EOSC.</p>

³⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Expected Outcome: Project results are expected to contribute to the following outcomes:

- EOSC will be advancing AI-readiness and Machine-Actionability (MA) in the ecosystem by offering AI-ready federated infrastructure and easy-to-use platform services for EOSC, in order to respond to one of the main challenges of research infrastructures for AI in science, namely the lack of interoperability between AI/ML solutions.
- EOSC will focus on integrating machine-actionable repositories within the ecosystem and demonstrating their reliability and effectiveness by collaborating with repository owners and service providers to implement MA tools and protocols, ensuring seamless integration with the EOSC EU Node.

Scope: Today, the sustainable FAIRification of data can be a bottleneck towards the goal of a European web of FAIR data and services. The use of AI/ML can significantly help in the process of FAIRification, data curation and data quality assurance, close to the source of the data. EOSC shall promote actions that give incentives to further advance AI-readiness and Machine-Actionability in the EOSC federation for FAIRification and to support their application.

European researchers need access to compute and repository services to develop, train and validate AI/ML models, in line with the GenAI4EU initiative and other key initiatives, like the Apply AI strategy, based on AI-ready research data from research infrastructures and third-party repositories. The proposed infrastructures should complement the EOSC EU Node capacity and be able to scale to a large number of users within transnational access to high-value datasets from national and European Research Infrastructure and e-Infrastructure ecosystems.

AI-based assistance tools shall be customised and trained for the discovery and composition of open science resources into custom workflows allowing researchers to discover and interact with open science infrastructures, combining relevant data, software and application assets.

Open Data and Open Research Software are essential for reliable, trustworthy, and transparent AI/ML. They ensure that datasets and algorithms are well documented, accessible, and reproducible, enabling others to validate and understand AI/ML algorithms. This transparency fosters trust, supports ethical standards, and ensures compliance with regulations, particularly important in the field of AI/ML.

The proposals should focus on all following aspects:

- Develop and prototype tools to drive machine-actionability in repositories, data, and services, establishing a network of trusted repositories linked to the EOSC EU Node;
 - formulate open protocols and policies to facilitate effortless data access, transfer, processing, and provenance updates within EOSC's repository and service network;

- o deliver AI-based capabilities to make interoperable AI/ML solutions and facilitate the setup of custom workflows for research data processing;
 - o offer tools/services for automatic quality measures of inputs and outputs of the AI/ML models.
- Provide federated infrastructure services for serving AI models integrating horizontal and thematic EOSC nodes:
 - o ensure capacities for AI model retraining and inference;
 - o take into account the whole research data life cycle, including raw data retention before AI modelling.
- Provide access to an easy-to-use technology platform offering reference implementations and recipes to quickly get started working with AI/ML with limited engineering overhead:
 - o promote and apply state-of-the-art AI/ML operational best practices;
 - o validate reference implementations and share commonly used recipes within EOSC.
- Establish and/or provide access to existing AI/ML model repositories and services to serve models for retraining of generic models for specific needs for future predictions and reproducibility:
 - o create AI/ML model repository and enhance FAIRness of existing AI/ML models;
 - o offer services for utilisation of these models, including fine-tuning and inference, thus providing the foundational building blocks for the development of AI applications in EOSC.
- Establish an EOSC AI/ML competency centre for the pooling of expertise and coordinated support on AI/ML use of data, compute infrastructure and AI/ML models for the upskilling and technical support of EOSC users and research operators, as a strategic asset that will enable a new paradigm for science production.

The proposers should take into account and leverage on the results of relevant projects in the field, including EOSC Data Commons³⁵, and the other initiatives and projects contributing to the development of EOSC, especially in the area of machine-actionability and data FAIRification.

This topic implements the co-programmed European Partnership for the European Open Science Cloud.

³⁵ Insert a reference

HORIZON-INFRA-2025-01-EOSC-04: Data stewards, skills and training for Open Science and FAIR practices

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The following additions to the general award criteria apply: The extent to which the proposed work incorporates the necessary coordination efforts and resources with other relevant projects and the EOSC governance structure in the context of the EOSC Partnership will be taken into account for Impact.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries will be subject to the following additional access rights: Each beneficiary must grant royalty-free access to its results to the EOSC Association for monitoring and developing policies and strategies for the EOSC. Each beneficiary must also provide directly to the EOSC Association the information the beneficiary deems necessary for monitoring and developing policies and strategies for the EOSC.</p> <p>Beneficiaries must deposit the digital research data generated in the action in a trusted repository federated in the EOSC in compliance with EOSC requirements.</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the</p>

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ³⁶ .
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Expected Outcome: Projects are expected to contribute to all of the following expected outcomes:

- Definition of consistent core curricula for data stewards throughout Europe, fostering the adoption of Open Science and FAIR principles.
- Enhanced data steward skills, enhancing their ability to manage and interpret complex data.
- Advancement of Open Science education throughout all research career stages. Creation and standardisation of open science curricula tailored to researchers at all career stages, promoting consistency and collaboration in Open Science practices.
- Expansion and strengthening of existing competence networks, broadening their scope across countries and disciplines and improving their readiness to support the uptake of Open Science and of EOSC. Development of a sustainable coordination network model to support synergies and continued growth.
- Mainstreaming transparent, aligned, and interoperable Open Science practices and promoting efficiency and trustworthiness in the management of FAIR digital objects.

Scope: The uptake of Open Science practices and of the European Open Science Cloud (EOSC) requires dedicated, professional profiles for data curation and data management, as well as equipping researchers with adequate skills and supporting them for the sharing and re-use of FAIR research digital objects. However, at present, data stewards and related profiles lack well-defined career paths, and data sharing and other open science practices are not fully mainstreamed within the research community and are often not recognised in research assessment practices.

The objective of this topic is to foster a stronger culture of Open Science and to address gaps related to the professionalisation of data stewards and to the acquisition and recognition of open science and data management skills at all career levels. This requires the identification of consistent core curricula for data stewards, together with the further development and coordination of competence centres at the European level.

Proposals are expected to cover the following activities:

- Coordinating European-level actions to make data steward curricula management consistent and to propose mechanisms to monitor their suitability and possible evolution.

³⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Enhancing data steward and researcher curricula with Open Science and FAIR practices, ensuring adaptability at the different contexts, levels and scientific domains of applicability.
- Addressing diverse data steward levels, including support staff and researchers.
- Collaborating with existing competence centres to foster Open Science and FAIR networks.
- Leveraging national networks and related institutional initiatives for European-level coordination.
- Launching outreach programs targeting early-career researchers and less-structured communities.
- Offering support to countries and institutions that are underrepresented and bolstering national competence centre networks.

Proposals are expected to build on and align with the European Competence Framework for Researchers (ResearchComp)³⁷ and with the revised Charter for Researchers³⁸, which underline the importance of Open Science competences and practices in research careers. Proposals should also seek for synergies with the activities of the Coalition for Advancing Research Assessment (CoARA) in order to reach a better recognition of open, collaborative practices in research assessment.

To ensure complementarity of outcomes, proposals are expected to cooperate and align with activities of the EOSC Partnership and to coordinate with relevant initiatives and projects contributing to the development of EOSC. In particular, proposals should take account of the results of the Skills4EOSC and FAIR-IMPACT projects and interact with related initiatives aimed at developing competence centres and at improving FAIR data practices in different contexts, like in research infrastructures, research performing organisation and higher education institutions. In particular, cooperation is expected with project(s) funded by call topic HORIZON-INFRA-2025-01-EOSC-02. Proposals are expected to propose adequate measures and tailor its support to different levels and contexts of data stewardship.

Proposals are expected to establish interactions with the operators of the EOSC Federation, in order to ensure alignment with the policies and practices of the EOSC Federation, notably on the area of data interoperability standards, persistent identifiers and others to identify useful tools and resources for the broad EOSC community. This topic implements the co-programmed European Partnership for the European Open Science Cloud.

³⁷ https://research-and-innovation.ec.europa.eu/jobs-research/researchcomp-european-competence-framework-researchers_en.

³⁸ <https://euraxess.ec.europa.eu/hrexcellenceaward/european-charter-researchers>.

HORIZON-INFRA-2025-01-EOSC-05: Using Generative AI (GenAI4EU) for Scientific Research via EOSC

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 7.50 and 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 37.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Subject to restrictions for the protection of European communication networks.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 4 and achieve TRL up to 6 by the end of the project – see General Annex B.
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The following additions to the general award criteria apply: The extent to which the proposed work incorporates the necessary coordination efforts and resources with other relevant projects and the EOSC governance structure in the context of the EOSC Partnership will be taken into account for Impact.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries will be subject to the following additional access rights:</p> <ul style="list-style-type: none"> • Each beneficiary must grant royalty-free access to its results to the EOSC Association for monitoring and developing policies and strategies for the European Open Science Cloud. Each beneficiary must also provide directly to the EOSC Association the information the beneficiary deems necessary for monitoring and developing policies and strategies for the European Open Science Cloud. • Each beneficiary must grant royalty-free access to its intellectual

	<p>property rights which are part of the results and are needed for further developing the European Open Science Cloud to legal entities identified by the granting authority and established in Member States or countries associated to the Horizon Europe Framework Programme. Such access rights are limited to non-commercial use.</p> <p>Beneficiaries must deposit the digital research data generated in the action in a trusted repository federated in the European Open Science Cloud (EOSC) in compliance with EOSC requirements.</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025)³⁹.</p> <p>Grants awarded under this topic will be linked through collaboration agreements to the grants from following action:</p> <p>HORIZON-INFRA-2025-01-EOSC-03: Advancing AI-readiness and Machine-Actionability in the EOSC Ecosystem.</p>
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Expected Outcome: Project results are expected to contribute to the following outcomes:

- EOSC will make available the high-quality machine-readable scientific datasets to be consumed by machine-driven Generative AI applications at the service of science in line with the GenAI4EU⁴⁰ initiative and other key EU initiatives, like the Apply AI strategy.
- EOSC will facilitate the pooling and sharing of high-value data sets originated from EOSC and other data spaces identified as priorities (including, but not limited to, public sector, health, climate, environmental, manufacturing, agriculture, energy, financial and mobility data). The large-scale actions supported by EOSC will include the creation of common data platforms enabling secure and compliant sharing and reuse of sensitive, confidential, proprietary and personal data, as well as large-scale experimentation based on Generative AI, in line with the GenAI4EU initiative and other key EU initiatives, like the Apply AI strategy.

³⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁴⁰ This call falls under the ‘GenAI4EU’ initiative as in the Communication from the Commission to the European Parliament, the Council, the European Economic And Social Committee and the Committee of the Regions on boosting startups and innovation in trustworthy artificial intelligence ((COM(2024) 28 final of 24.1.2024).

Scope: The scope of this call is to demonstrate and foster the use of Generative AI for Scientific Research, in line with the GenAI4EU initiative and other key EU initiatives, like the Apply AI strategy, throughout the research data lifecycle supported by EOSC. Generative AI can be used for activities such as writing, data generation and analysis, reporting and many others, for improving productivity. This enables lifting science beyond the human scale by facilitating the deployment and use of smart algorithms, machine learning and AI services onto the Web of FAIR Data. The awareness and readiness of using Generative AI for scientific research must be raised by training activities.

AI-powered natural language interfaces can transform the way researchers interact with open science infrastructures, how they discover and combine relevant data, software and application assets. EOSC should evolve towards offering such capabilities in ways that ensure unbiased and trustworthy responses. This includes adopting FAIR practices, for AI-trained models as well, to address challenges ranging from reproducibility to trustworthiness.

Open Data and Open Research Software are essential for reliable, trustworthy, and transparent GenAI. They ensure that datasets and algorithms are well-documented, accessible, and reproducible, enabling others to validate and understand GenAI algorithms. This transparency fosters trust, supports ethical standards, and ensures compliance with regulations, particularly important in the field of GenAI.

The proposals shall focus on all following aspects:

- Enrich the EOSC federation with Generative AI tools for evaluating research data quality, ensuring trustworthiness across the European network of trusted repositories, accessible by humans, machines, and Generative AI services: formulate protocols and policies to facilitate effortless data access, processing, and provenance updates within EOSC's repository and service network.
- Support European research infrastructures to improve the FAIRness of their data, so that they are ready to be combined with data of infrastructures in scientifically neighbouring domains, in order to provide Generative AI-ready data.
 - o conduct pilots to validate the effectiveness and accuracy of the Generative AI-driven data quality evaluation methods, iteratively improving and refining them based on feedback and real-world use cases and removing the potential biases inherited from the training data.
- Run community engagement and support programmes for implementing Generative AI in scientific workflows via EOSC:
 - o promote a sound training programme to facilitate the uptake and the use of Generative AI as a means to facilitate the FAIRification of data and data curation;
 - o demonstrate how Generative AI can facilitate quality assessment of FAIR data;

- o advance the realization of machine-actionable (MA) research data and services, including AI-based systems;
- o propose protocols and policies to govern automatic data workflows within the network of repositories and services.

The proposals are expected to deliver on one or more of the following:

- Develop, promote and support real-life use cases for Generative AI models in scientific research domains, in line with the GenAI4EU initiative and other key EU initiatives, like the Apply AI strategy, such as:
 - o augment datasets in scientific fields that rely on image analysis, such as biology, astronomy, and materials science: by generating synthetic images that closely resemble real data, researchers can expand their datasets, improve model robustness, share anonymized version of sensitive data and generalize better to unseen scenarios;
 - o learn the underlying patterns of complex time-series data, such as sensor readings in environmental monitoring or physiological signals in healthcare: by generating data samples that match the learned distribution, these models can detect anomalies or deviations from normal behaviour;
 - o accelerate materials design and discovery by predicting the properties of new materials without the need for extensive experimental testing: these models can generate novel material structures with desired properties, such as strength, conductivity, or catalytic activity, based on learned relationships between material compositions and properties;
 - o advance drug design and molecular modelling by generating novel molecular structures with desired pharmacological properties: these models can explore vast chemical spaces, predict the interactions between molecules and biological targets, and optimize drug candidates for efficacy and safety;
 - o simulate complex systems and phenomena in various scientific domains, such as physics, chemistry, and ecology: by capturing the underlying dynamics and interactions of the system, these models can generate realistic simulations that mimic observed behaviour or predict future outcomes under different conditions.

The proposers should take into account and leverage on the results of relevant projects in the field, including AI4EOSC⁴¹, iImagine⁴², EOSC Data Commons⁴³, RI-SCALE⁴⁴, and other developments within the scope of the GenAI4EU initiative and other key EU initiatives, like the Apply AI strategy.

⁴¹ <https://ai4eosc.eu/>

⁴² <https://www.imagine-ai.eu/>

⁴³ Grant no 101188179 from the call HORIZON-INFRA-2024-TECH-01

⁴⁴ Grant no 101188168 from the call HORIZON-INFRA-2024-TECH-01

This topic implements the co-programmed European Partnership for the European Open Science Cloud.

Proposals could consider the inclusion of the European Commission's Joint Research Centre (JRC) research infrastructure in their research infrastructure portfolio for the creation and sharing of high-quality machine-readable scientific datasets to be consumed by machine-driven Generative AI applications. In this regard, the JRC will consider collaborating with any successful proposal.

DRAFT

Destination INFRASERV - Research infrastructures services to support health research, accelerate the green transition and the digital transformation, and advance frontier knowledge (2025)

EU supported transnational access to research infrastructures has radically transformed the availability of state-of-the-art facilities for researchers, reinforcing Europe's strong research performance. Horizon Europe marked a shift towards new types of transnational access grants, awarded to consortia of diverse types of facilities providing access to broad portfolios of installations and scientific services relevant for a large research domain or in support of societal challenge and EU priorities.

Actions under this destination are invited to facilitate a fast-track access for Ukrainian researchers from government controlled territories, through specific outreach activities, support in preparing applications to the access calls, selection priority at equal scientific merit, as well as extended ad-hoc training and duration of visits (beyond 3 months).

The expected impact of the activities supported under this destination notably includes:

- Effective access of European researchers to the best research infrastructure services from national and pan-European research infrastructures (such as ESFRI Projects and Landmarks, ERICs), while ensuring both curiosity-driven and challenge-driven access, considering also that challenge-driven access must notably foster the role of research infrastructures in greening society and improving its resilience to crises.
- Improved research infrastructure services to address evolving scientific and societal challenges, including those related to EU priorities, and to reinforce the excellence, attractiveness and competitive edge of the ERA and its capacity to address future challenges and priorities, considering that this increasingly requires interdisciplinarity and cross-domain collaboration.
- Improved transnational access to new users such as early-stage career researchers, and researchers from other fields or sectors, while making sure that these new activities do not come at the cost of already overbooked transnational access services.
- New discoveries and knowledge breakthroughs enabled by access provision to the best and in some cases unique state-of-the-art RIs.
- A new generation of researchers trained to optimally exploit all the essential and advanced tools for their research.

Proposals are invited against the following topic(s):

HORIZON-INFRA-2025-01-SERV-01: Research infrastructure services to enable R&I addressing main challenges and EU priorities related to the health domain

Call: Research Infrastructures 2025

Horizon Europe - Work Programme 2025
Research Infrastructures

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants are not required to include in their proposal a plan for the exploitation and dissemination of the results as the main objective of these actions is the service provision.</p> <p>As proposals need to give information on the research infrastructures providing access, the page limit of the application is 100 pages.</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <p>Given the specific nature of this topic, access provision activities must be included in the proposal. Please read carefully the provisions under the section “Specific features for Research Infrastructures” of this work programme part before preparing your application.</p> <p>Considering the Union’s interest to make accessible to its researchers the most advanced research infrastructures, wherever they are in the world, legal entities established in Australia, Brazil, Canada, Chile, India, Japan, Mexico, New Zealand, Republic of Korea, Singapore, Switzerland, and USA, which provide, under the grant, access to their research infrastructures to researchers from Member States and Associated Countries, are exceptionally eligible for funding from the Union under this topic.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The following additions to the general award criteria apply:</p> <p><i>For the 'Excellence' criterion</i>, the additional following aspects will also be taken into account:</p>

	<ul style="list-style-type: none"> • The extent to which the access activities (trans-national and/or virtual access) will offer access to the state-of-the-art infrastructures of European interest in the field, high quality services, and will enable users to conduct excellent research. • The extent to which the project will contribute to facilitating and integrating the access procedures, to improve the services the infrastructures provide and to further develop their on-line services.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering the different areas, grants will be awarded to applications not only in order of ranking but at least also to those proposals that are the highest ranked within each area, provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs may take form of unit costs for trans-national and virtual access to research infrastructures as defined in the Decision authorising the use of unit costs for the actions involving trans-national and virtual access (see Annex 2a of the Horizon Europe Model Grant Agreement).</p>

Expected Outcome:

For all areas:

- Provision of innovative, customised and efficient research infrastructures services enhancing and increasing society's long-term and consistent problem-solving capacity and evidence-based policy making related to the health domain.

Project results are expected to contribute to all of the following expected outcomes for one of the areas:

Area 1: research infrastructure services to support research and development of medical countermeasures for epidemic response:

- Excellent research and innovation to identify, characterise and mitigate the effects of existing and future emerging pathogens of public health concern.
- Comprehensive catalogue of research infrastructure services relevant to tackle infectious diseases epidemics, updated and available.
- Increased knowledge on, and development of intervention tools against (re)emerging pathogens enabled by relevant research infrastructure services.

- Availability of research data emerging from access provision activities for re-use on common data platforms and registries, according to FAIR principles and compliant with legal provisions under the General Data Protection Regulation (GDPR).
- Challenge driven integration of EU research infrastructures and organisational and structural alignment with the future Pandemic Preparedness Partnership, the EU Reference Laboratories and the EU4Health funded laboratory network [DURABLE](#) (or relevant legacy initiative).
- Providing a long-term sustainability concept for such a research infrastructure network supporting epidemic research.

Area 2: research infrastructure services for improving clinical research in the paediatric area:

- Advancement of paediatric medicines and other therapeutic and diagnostic approaches for this population group to markets and towards clinical use;
- Accelerated availability of solutions and products to paediatric patients in need;
- Wider access to rationally designed research infrastructure services across Europe to underpin the competitiveness of the European industry and of biotech SMEs developing paediatric medicines and treatment and diagnostic devices;
- Joined forces of research infrastructures and paediatric competence networks in EU Member States and Associated Countries, to facilitate paediatric research in the context of pertinent EU regulatory environment;
- Availability of innovative tools to conduct paediatric clinical trials, for the re-use of population and historical data, and for enhanced data sharing across actors at different care levels and across regions in Europe.

Area 3: research infrastructure services to enable research linking environmental factors to human health:

- Better risk assessment tools and data evidence to anticipate and mitigate negative environmental implications on human health;
- Evidence to inform policy making and public health bodies with respect to assessment and management of environmental risks for human health;
- Wider access to specialised research infrastructure services to underpin the competitiveness of the European industry including SMEs active in the field of risk assessment and management of environmental impact on human health.
- Link with the environmental research on the exposure to other living organisms within the One-Health concept.

Scope:

This topic aims at providing trans-national access (on-site or remote) and/or virtual access to integrated and customised research infrastructures services for challenge-driven research and innovation in each of the areas listed below, all related to the health domain, offered by a wide range of complementary and interdisciplinary top level research infrastructures.

Access also includes ad hoc users' training and scientific and technical support. Training courses for using the infrastructures may also be supported. Training courses and ad hoc users' training will prepare the new generations of researchers to properly exploit leading-edge research infrastructures, and should provide them with appropriate skills for data stewardship.

Activities to facilitate and integrate the access procedures, to further develop the remote or virtual provision of services and to improve, customise and harmonise the services the infrastructures will also be supported, including for better serving the needs of open EU industrial research and innovation.

The main goal of this topic is access provision to existing services: this should be clearly reflected by the proposed activities and the allocated resources. The improvement and optimisation of the offered services and the development of new services, relevant to the challenges, will also be supported, including joint/cross- research infrastructures services provided the resulting services are opened and offered already under the actions (short term R&D) and that the long-term sustainability of such services is ensured by the participant research infrastructures. Further development of new or improved services for use in the mid-term (2-3 years) may also be supported when duly justified e.g. to address well-identified needs such as in the ESFRI Landscape Analysis, or in the research agendas of Horizon Europe Pillar II Missions or European Partnerships. The topic will not support longer-term R&D for new instrumentation, tools, methods and advanced digital solutions.

Proposals should adhere to the guidelines and principles of the European Charter for Access to Research Infrastructures⁴⁵

Data management (and related ethics issues), interoperability, as well as the connection of digital services (e.g. data services) to the European Open Science Cloud, should be addressed where relevant.

Proposals should take due account of major European or international initiatives relevant in the domain. When appropriate, they should foster the use and deployment of (open) global standards.

Proposals should make available to researchers a wide, inclusive and comprehensive portfolio of complementary research infrastructure services, including data services, and customised workflows to enable R&I addressing the set challenge. To this extent, they should involve - as beneficiaries, affiliated entities, third parties, or external providers of purchased services - the

⁴⁵ <https://op.europa.eu/publication-detail/-/publication/ec4692ae-ac6f-11ef-acb1-01aa75ed71a1>

necessary interdisciplinary set of research infrastructures of European interest⁴⁶ that provide such services.

Proposed actions should ensure that they are strongly linked to research infrastructures of pan-European relevance, as prioritised by ESFRI and the ERICs. Therefore, proposals should include at least one ESFRI Landmark⁴⁷ or European Research Infrastructure Consortium (ERIC)⁴⁸ as beneficiary. In case of a distributed⁴⁹ ERIC, as an alternative to the ERIC participating as a beneficiary, a legal entity that is hosting ERIC facilities, resources or related services may participate as a beneficiary. A declaration signed by the legal representative of the ERIC should confirm that the ERIC is supporting this participation, explain the relevance for the ERIC and describe any further cooperation with the ERIC.

Access could also be open, in accordance with the ‘Specific Features for Research Infrastructure’ section of this Work Programme, to third countries’ researchers to work on global challenges. Research infrastructures from third countries⁵⁰ may be involved when appropriate. However, such research infrastructures should only be involved, as beneficiaries or affiliated entities, if they offer complementary or more advanced services than those available in EU Member States and Associated Countries.

Proposals should include an outreach and engagement plan to actively advertise their services to targeted research communities, notably from Widening countries and, if applicable, to relevant industries, including SMEs.

Proposals are expected to exploit synergies and to ensure complementarity and coherence with other EU grants supporting access provision.

Proposals should include the list of services/installations⁵¹ opened by research infrastructures for trans-national or virtual access and the amounts of units of access made available for users. Further conditions and requirements relating to access provisions that applicants should fulfil when drafting a proposal are given in the “Specific features for Research Infrastructures” section of this work programme part. Compliance with these provisions will be taken into account during evaluation.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement. However, where applicable, proposals should promote in their calls for access the integration of the gender dimension in the research and innovation content of the users applying to these calls.

⁴⁶ A research infrastructure is of European interest when is able to attract users from EU or associated countries other than the country where the infrastructure is located. This includes ESFRI and ERIC infrastructures.

⁴⁷ See lists of ESFRI ‘Landmarks’ in the 2021 ESFRI Roadmap on <https://roadmap2021.esfri.eu/>
⁴⁸ [European Research Infrastructure Consortium \(ERIC\) | European Commission \(europa.eu\)](https://roadmap2021.esfri.eu/)

⁴⁹ The term ‘distributed’ research infrastructure typically refers to one or a few central hubs and several interlinked (national or institutional) nodes where many components of the research infrastructure may not be part of the same legal entity, the ERIC.

⁵⁰ See the Eligibility conditions for this topic.

⁵¹ “Installation” means a part or a service of a research infrastructure that can be used independently from the rest. A research infrastructure consists of one or more installations.

The topic targets the following scientific challenges and EU priority areas related to the health domain. Proposals are expected to address one of the following areas and must explicitly state which area they address:

Area 1: Research infrastructure services to support research and development of medical countermeasures for epidemic response

The proposals in this area should build on the integrated research infrastructure services comprehensive and inclusive portfolio to support epidemic preparedness research, provide the capacity to respond to infectious disease epidemics, and underpin leading research in the domain. It should build on work already carried out following the [HORIZON-INFRA-2021-EMERGENCY-02](#) call and the ISIDORE project.

The proposed action should support the provision of trans-national and/or virtual access to researchers, training for using the infrastructures, activities to improve and customise the services the infrastructures provide, as well as facilitating and integrating access procedures, and further developing the remote or virtual provision of services. Proposals should foster increased access to national research infrastructures through outreach activities targeting relevant user communities.

Access to research infrastructure services should be provided to users to support their research projects targeting: i) basic research meant to increase knowledge on pathogens with epidemic potential, and/or ii) the development of new or adapted prevention and/or intervention tools and measures. These include new or adapted diagnostic procedures and therapies, drugs, vaccines, or disease vector control.

Reflecting the One-Health concept, services supporting research on transmission of pathogens from animals to humans (or vice versa, animals as host reservoir), including vector-borne transmission, should be covered. Flexibility in the provision of services should be properly demonstrated to ensure fast re-orientation and expansion of the portfolio in response to unexpected epidemics situations. Effective operational links established within the ISIDORE project with the epidemics risk assessment and management bodies like ECDC, WHO, WOA, and EU-HERA should be ensured. Furthermore, alignment with the future Pandemic Preparedness partnership should be taken into consideration. Global standards, relevant data platforms and registries should be used to make user project results FAIR and usable, thus enabling further research on pathogens and disease manifestation.

Proposals could consider the inclusion of the European Commission's Joint Research Centre (JRC) research infrastructure (Nanobiotechnology laboratory) in their research infrastructure portfolio for biophysical characterisation of recombinant proteins, antigens, therapeutic antibodies, lipid nanoparticles therapeutic and its expertise at the interface between the research activities and regulatory aspects. In that respect, the JRC will consider collaborating with any successful proposal and this collaboration, when relevant, should be established after the proposal's approval.

Area 2: Research infrastructure services for improving clinical research in the paediatric area

Paediatric healthcare in EU and worldwide is often hampered by an enduring lack of specific medicines and therapies tailored for use in paediatric population. Proposals should integrate and give access to research infrastructure services to enable and accelerate R&I towards innovative biomedical products and therapies for children, including new-borns. They should support in particular, but not limited to, clinical R&I projects addressing therapeutic, diagnostic and prevention measures for paediatric disease management and help these projects to meet regulatory requirements for licensure and clinical use of paediatric medicines and medical devices.

Due to the peculiarities of paediatric clinical research with study subjects often dispersed across Europe, research infrastructure services offered should include innovative trial designs and novel monitoring tools, including the necessary support at local level. GDPR compliant and regulatory acceptable access and re-use of relevant population, historical and real world care data should be facilitated, as should be the harmonisation of respective ethics reviews across Europe.

As paediatric research is often faced with locally dispersed case incidences, wider geographical outreach and international collaboration beyond Europe, including with LMIC (Low-to-Middle-Income Country) is strongly encouraged.

Appropriate links and alignment should be ensured with EU level initiatives such as EnprEMA, and Horizon Europe partnerships such as the Innovative Health Initiative, the Transforming Health and Care Systems partnership, the Personalised Medicine partnership (EP PerMed), the ERA for Health Research (ERA4Health), and the partnership on Rare Diseases research (ERDERA).

Data management should duly cater for interoperability of data services, while contributing to GDPR compliant access modalities as required in the European Health Data Space. Metadata, statistical and anonymised data sets should duly comply with FAIR principles to become accessible under the European Open Science Cloud.

Area 3: Research infrastructure services to enable research linking environmental factors to human health

Human health is strongly dependant on exposure to environmental factors⁵² with 10% of all premature deaths in EU linked to environmental pollution.⁵³.. Proposals should integrate and give access to a wide range of monitoring and experimental research infrastructure services to investigate the effect of environmental exposure. Services should be provided to user projects aiming to characterize environmental risk factors (e.g. of chronic health conditions) and/or to develop innovative tools and methods for deciphering the causal pathways and the prevention

⁵² Physical substance (solids, liquids or gas) or energy (e.g. noise, light, electromagnetic fields, radioactive radiation, etc.) present in the environment.

⁵³ EEA: <https://www.eea.europa.eu/en/topics/at-a-glance/health>

of associated diseases. Integration of multiple types of data reaching from environmental exposure measurements to granular human omics, analytical and clinical data including also socio-economic and lifestyle data, in line with One-Health approach, is key for this type of research at the interface of environmental and health research.

Proposals in this area should customise and further develop research infrastructure services to meet the needs of ongoing research in the field. Appropriate links and complementarities should be ensured with relevant ongoing initiatives and resources, such as pertinent ESFRI roadmap efforts, e.g. EIRENE⁵⁴, the European Human Exposome Network (EHEN), the Information Platform for Chemical Monitoring (IPCHEM), the EC Knowledge Centre on Cancer⁵⁵, the European Microwave Signature Laboratory, the European Partnership for the Assessment of Risks from Chemicals (PARC), and other Horizon Europe relevant projects including the ones emerging from the 2023 and 2024 ‘Environment and health’ calls of Cluster 1 - Health.

Proposals could consider the inclusion of the European Commission's Joint Research Centre (JRC) research infrastructure (Water Laboratory) in their research infrastructure portfolio for wastewater surveillance for various application fields from One-Health use cases, biosecurity and water resilience including water reuse and irrigation, as well as its expertise at the interface between the research activities and regulatory aspects. Proposals could also consider the inclusion of the JRC's High Throughput Testing (HTT) facility, which automates in vitro toxicology methods to generate large datasets from bespoke chemical libraries. Such data can be used in a variety of ways to explore potential links between exposure to environmental chemicals and their mixtures and adverse effects on human health. The JRC will consider collaborating with any successful proposal.

HORIZON-INFRA-2025-01-SERV-02: Research infrastructure services to enable R&I addressing main challenges and EU priorities

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Research and Innovation Actions

⁵⁴ [EIRENE RI](#), Research Infrastructure for EnvIRonmental Exposure assessment in Europe

⁵⁵ The knowledge centre on Cancer and its five pillars: 1) [Health Promotion and Disease Prevention Knowledge Gateway](#) 2) [The European Cancer Information System](#) (ECIS) and the [European Network of Cancer Registries](#) (ENCR) 3) [The European Commission Initiatives on Breast and Colorectal Cancers](#) 4) [The Cancer Inequalities Registry](#), 5) [The European Platform on Rare Disease Registration](#) (EU RD Platform)

<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants are not required to include in their proposal a plan for the exploitation and dissemination of the results as the main objective of these actions is the service provision.</p> <p>As proposals need to give information on the research infrastructures providing access, the page limit of the application is 100 pages.</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <p>Given the specific nature of this topic, access provision activities must be included in the proposal. Please read carefully the provisions under the section “Specific features for Research Infrastructures” of this work programme part before preparing your application.</p> <p>Considering the Union’s interest to make accessible to its researchers the most advanced research infrastructures, wherever they are in the world, legal entities established in Australia, Brazil, Canada, Chile, India, Japan, Mexico, New Zealand, Republic of Korea, Singapore, Switzerland, and USA, which provide, under the grant, access to their research infrastructures to researchers from Member States and Associated Countries, are exceptionally eligible for funding from the Union under this topic.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The following additions to the general award criteria apply:</p> <p><i>For the 'Excellence' criterion</i>, the additional following aspects will also be taken into account:</p> <ul style="list-style-type: none"> • The extent to which the access activities (trans-national and/or virtual access) will offer access to the state-of-the-art infrastructures of European interest in the field, high quality services, and will enable users to conduct excellent research. • The extent to which the project will contribute to facilitating and integrating the access procedures, to improve the services the infrastructures provide and to further develop their on-line services.

<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering the different areas, grants will be awarded to applications not only in order of ranking but at least also to those proposals that are the highest ranked within each area, provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs may take form of unit costs for trans-national and virtual access to research infrastructures as defined in the Decision authorising the use of unit costs for the actions involving trans-national and virtual access (see Annex 2a of the Horizon Europe Model Grant Agreement).</p>

Expected Outcome:

For all areas:

- Provision of innovative, customised and efficient research infrastructures services enhancing and increasing society's long-term and consistent problem-solving capacity and evidence-based policy making.

Project results are expected to contribute to all of the following expected outcomes for one of the areas:

Area 1: research infrastructure services for advanced biotechnology and biomanufacturing:

- Reinforced support for breakthrough research and innovation for advancing industrial biotechnology.
- Wider access for academic and industrial researchers to enhanced and further integrated research infrastructure services in the field.
- Cross-fertilisation and wider sharing of knowledge and technologies across the relevant scientific disciplines and sectors.
- Harmonisation and development of standards, and sharing of best practices ensuring scientific reproducibility in the field.
- Enhanced and further integrated research infrastructures capacities in support of the European Green Deal objectives, the EU's objectives for open strategic autonomy and resilience and the actions and priorities of the Commission communication "Building the

future with nature: Boosting Biotechnology and Biomanufacturing in the EU⁵⁶”.

Area 2: research infrastructure services for access to novel radionuclides and facilities:

- Research in radionuclides facilitated, contributing to the development of medical treatments and to the underlying required supply of stable or radio-isotopes for these treatments.
- Contribution of research infrastructures and scientific services to the EU action plan to support the safe, high quality and reliable use of radiological and nuclear technology in healthcare.

Area 3: research infrastructure services to improve the understanding and prediction of future climate changes and their impact:

- Reinforced support for cutting-edge research and innovation in understanding and predicting future climate changes and their impacts
- Wider, user-friendly and coordinated access for researchers to enhanced and further integrated state-of-the-art Earth system models, including high resolution or high complexity models and relevant high-performance computing resources
- More robust evidence underpinning the assessments of the Intergovernmental Panel on Climate Change (IPCC) about the state of scientific, technical and socio-economic knowledge on climate change, its impacts, risks and response options.
- More effective climate policies in the context of the implementation of the European Green Deal, the European Climate Law, and the Paris Agreement.

Area 4: research infrastructure services for new aviation fuels and combustion technologies

- enabling research and innovation in the field of new aviation fuels and combustion technologies to support European scientific and industrial competitiveness, including on adaption and expansion of existing test combustion capabilities to use new fuels (in particular biogenic and synthetic sustainable aviation fuels, liquid hydrogen) for future propulsion systems, referee-test rigs for the assessment of the potential and characteristics of sustainable aviation fuels in respect to safety and reliability (in contrast to Jet A1 using application-oriented combustion system including concept and design work based on known referee-rigs), test rigs that support the approval and qualification of SAF candidates entering ASTM D4054 (Tier 2.5)

⁵⁶ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS [Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU](#)

- wider access for academic and industrial researchers to enhanced and further integrated RI services for fostering the testing of sustainable fuels to address emerging socio-economic needs;
- enhanced competitiveness of European aviation industry in the field through access to the broadest spectrum of advanced research tools and providing resources and services for research communities to conduct research and foster innovation in the field;
- positioning the top-level research infrastructures in the field as reliable innovation partners for world-wide researchers and European innovators
- where relevant, test beds may be used beyond research, e.g. for education and training.

Scope:

For all areas:

This topic aims at providing trans-national access (on-site or remote) and/or virtual access to integrated and customised research infrastructure services for challenge-driven research and innovation in each of the areas listed below, offered by a wide range of complementary and interdisciplinary top level research infrastructures.

Access also includes ad hoc users' training and scientific and technical support. Training courses for using the infrastructures may also be supported. Training courses and ad hoc users' training will prepare the new generations of researchers to properly exploit leading-edge research infrastructures, and should provide them with appropriate skills for data stewardship.

Activities to facilitate and integrate the access procedures, to further develop the remote or virtual provision of services and to improve, customise and harmonise the services the infrastructures will also be supported, including for better serving the needs of open EU industrial research and innovation.

The main goal of this topic is access provision to existing services: this should be clearly reflected by the proposed activities and the allocated resources. The improvement and optimisation of the offered services and the development of new services, relevant to the challenges, will also be supported, including joint/cross-research infrastructure services provided the resulting services are opened and offered already under the actions (short term R&D) and that the long-term sustainability of such services is ensured by the participant research infrastructures. Further development of new or improved services for use in the mid-term (2-3 years) may also be supported when duly justified e.g. to address well identified needs such as in the ESFRI Landscape Analysis, or in the research agendas of Horizon Europe Missions or Partnerships. The topic will not support longer-term R&D for new instrumentation, tools, methods and advanced digital solutions.

Proposals should adhere to the guidelines and principles of the European Charter for Access to Research Infrastructures⁵⁷

Data management (and related ethics issues), interoperability, as well as the connection of digital services (e.g. data services) to the European Open Science Cloud, should be addressed where relevant.

Proposals should take due account of major European or international initiatives relevant in the domain. When appropriate, they should foster the use and deployment of (open) global standards.

Proposals should make available to researchers a wide, inclusive and comprehensive portfolio of complementary research infrastructure services, including data services, and customised workflows to enable R&I addressing the set challenge. To this extent, they should involve - as beneficiaries, affiliated entities, third parties, or external providers of purchased services - the necessary interdisciplinary set of research infrastructures of European interest⁵⁸ that provide such services.

Proposed actions should ensure that they are strongly linked to research infrastructures of pan-European relevance, as prioritised by ESFRI and the ERICs. Therefore, proposals should include at least one ESFRI Landmark⁵⁹ or European Research Infrastructure Consortium (ERIC)⁶⁰ as beneficiary. In case of a distributed⁶¹ ERIC, as an alternative to the ERIC participating as a beneficiary, a legal entity that is hosting ERIC facilities, resources or related services may participate as a beneficiary. A declaration signed by the legal representative of the ERIC should confirm that the ERIC is supporting this participation, explain the relevance for the ERIC and describe any further cooperation with the ERIC.

Access could also be open, in accordance with the ‘Specific Features for Research Infrastructure’ section of this Work Programme, to third countries’ researchers to work on global challenges. Research infrastructures from third countries⁶² may be involved when appropriate. However, such research infrastructures should only be involved, as beneficiaries or affiliated entities, if they offer complementary or more advanced services than those available in EU Member States and Associated Countries.

⁵⁷ <https://op.europa.eu/en/publication-detail/-/publication/ec4692ae-ac6f-11ef-acb1-01aa75ed71a1>

⁵⁸ A research infrastructure is of European interest when is able to attract users from EU or associated countries other than the country where the infrastructure is located. This includes ESFRI and ERIC infrastructures.

⁵⁹ See lists of ESFRI ‘Landmarks’ in the 2021 ESFRI Roadmap on [https://roadmap2021.esfri.eu/European_Research_Infrastructure_Consortium_\(ERIC\)_|_European_Commission_\(europa.eu\)](https://roadmap2021.esfri.eu/European_Research_Infrastructure_Consortium_(ERIC)_|_European_Commission_(europa.eu))

⁶⁰ The term ‘distributed’ research infrastructure typically refers to one or a few central hubs and several interlinked (national or institutional) nodes where many components of the research infrastructure may not be part of the same legal entity, the ERIC

⁶² See the Eligibility conditions for this topic. The Strategic Agenda for Medical Ionising Radiation Applications (SAMIRA) contributes to [Europe's Beating Cancer Plan](#), and responds to the EU Council's conclusion from 24 May 2019 on [non-power nuclear and radiological technologies and applications](#)

Proposals should include an outreach and engagement plan to actively advertise their services to targeted research communities, notably from Widening countries and, if applicable, to relevant industries, including SMEs.

Proposals are expected to exploit synergies and to ensure complementarity and coherence with other EU grants supporting access provision.

Proposals should include the list of services/installations⁶³ opened by research infrastructures for trans-national or virtual access and the amounts of units of access made available for users. Further conditions and requirements relating to access provisions that applicants should fulfil when drafting a proposal are given in the “Specific features for Research Infrastructures” section of this work programme part. Compliance with these provisions will be taken into account during evaluation.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

The topic targets the following areas related to scientific challenges and EU priorities. Proposals are expected to address one of the areas and must explicitly state which area they address:

Area 1: research infrastructure services for advanced biotechnology and biomanufacturing

The advances in life sciences, supported by digitalisation and artificial intelligence (AI), and the potential of solutions based on biology to solve societal issues, make biotechnology and biomanufacturing very promising technological areas. They can help the EU to modernise its agriculture, forestry, energy, food and feed sectors and industry. In addition, these technologies can contribute to a more competitive and resilient EU, that provides better healthcare to its citizens, and succeeds in its green and digital transitions.

To further leverage research and boost innovation, a more productive use of relevant research infrastructures must be facilitated with specific attention to accelerating the use of the Industrial Biotechnology Innovation and Synthetic Biology Accelerator (EU IBISBA) as a trusted digital repository and service network for the sector.

Building on past integration of access to facilities and services, research infrastructures in the field are invited to reach a higher and more interdisciplinary level of integration to offer access, through a single entry point, to a coherent and complementary set of services, customising and combining them when necessary, to support academic and industrial research teams in support notably of the actions and priorities set out in the Commission Communication “Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU”.

⁶³ “Installation” means a part or a service of a research infrastructure that can be used independently from the rest. A research infrastructure consists of one or more installations.

Users should benefit from the harmonisation of standards, share of best practices and development of working standards promoted by the access providers, ensuring reproducibility and interoperability and accelerating the translation of knowledge into innovation. Users should also benefit from most recent efforts towards digitalisation of research infrastructures services and access to bioprocess data.

Proposals could consider the inclusion of the European Commission's Joint Research Centre (JRC) research infrastructure (Nanobiotechnology laboratory and Environmental biotechnology laboratory) in their research portfolio for the characterization of advanced biotechnology products and systems and its expertise at the interface between innovation, regulatory sciences and policy. In that respect, the JRC will consider collaborating with any successful proposal and this collaboration, when relevant, should be established after the proposal's approval.

Area 2: research infrastructures services for access to novel radionuclides and facilities

Proposals should carry out all of the following activities:

- Build on the work carried out by the PRISMAP project in establishing a network of world-leading European facilities, including nuclear reactors, accelerators and radiochemical laboratories, offering a broad catalogue of radionuclides for medical research. The network must offer researchers access to radionuclides and to the complementary biomedical facilities.
- Offer services for:
 - o the production and delivery of high purity radionuclides;
 - o associated research in biomedical facilities;
 - o supporting translational research and preclinical research techniques, either self-service or fully performed as a service.
- Investigating towards the development of upscaling of the production of these novel radionuclides, in the form of novel production technology, new purification methods, and proof-of-concept investigations showing the development of new treatments from test bench to patient care.
- Monitoring and engagement with other initiatives supporting the EU SAMIRA⁶⁴ action plan, in particular as regards the supply of novel (stable or radio-) isotopes and the development of innovative production methods, based on existing or new facilities.
- Proposals could consider the inclusion of the European Commission's Joint Research Centre (JRC) research infrastructure PAMEC (Properties of Actinide Materials under

⁶⁴ See the Eligibility conditions for this topic. The Strategic Agenda for Medical Ionising Radiation Applications (SAMIRA) contributes to [Europe's Beating Cancer Plan](#), and responds to the EU Council's conclusion from 24 May 2019 on [non-power nuclear and radiological technologies and applications](#)

Extreme Conditions) and FMR (Fuel for Material Research) in Karlsruhe, Germany, in their research infrastructure portfolio. The infrastructure is used and available for research into novel therapeutic medical radionuclides, including alternative production paths based on radionuclide such as but not limited to technetium, uranium or thorium targets, as well as the development of novel compounds for the treatment of various tumors by radioligand therapy. In this regard, the JRC will consider collaborating with any successful proposal in these areas and this collaboration, when relevant and upon availability of the radionuclide, should be established after feasibility study by local contact and the proposal's approval.

Area 3: research infrastructure services to improve the understanding and prediction of future climate changes and their impact.

Meeting the goals of the Paris Agreement and achieving climate neutrality by 2050 in the EU require strengthening and continuously updating the underpinning scientific evidence base. This includes improving the knowledge of the Earth system, its recent evolution and future responses under different global emissions pathways and socio-economic scenarios while establishing stronger linkages with integrated assessment and impact modelling communities. State-of-the-art Earth's climate system models are essential for advanced understanding and capability to analyse the recent past and predict the future evolution of the coupled Earth system, at global to regional or more local scales, and across timescales.

Projects should provide access to a wide portfolio of world-class and complementary services in the field of Earth climate system modelling, such as models, software, high-performance computing resources, and data to enable efficient production, evaluation, and exploitation of model simulations, as well as rapid and reliable exchange of knowledge across multiple projects, models, and modelling communities in Europe and globally, and also with policymakers, planners, and climate services. Proposals should ensure appropriate links with relevant European and international initiatives such as projects supported under Horizon Europe Cluster 5 Destination 1 "Climate sciences and responses for the transformation towards climate neutrality", the EU Mission on Adaptation to Climate Change, and Destination Earth.

Proposals could consider the inclusion of the European Commission's Joint Research Centre (JRC) research infrastructure (Marine Optical laboratory - MARlab) in their research infrastructure portfolio for supporting Earth Observations of the aquatic environment through highly accurate bio-optical in situ reference measurements and modelling, as well as its expertise at the interface between the research activities and regulatory aspects. In this regard, the JRC will consider collaborating with any successful proposal.

Area 4: research infrastructures services for New Aviation Fuels and Combustion Technologies

With the ratification of the ReFuelEU Aviation initiative, the extensive use of sustainable fuels in European aviation will become legally binding. The development of a competitive European industry for the production of sustainable fuels requires, on the one hand, the

consideration of a large number of sustainable raw materials as a starting point for the production process but also the introduction of alternative energy sources (especially liquid hydrogen). Due to the extremely high safety requirements, comprehensive test series in the development and investigation of the effects of these fuels on the various system elements of air traffic (this includes aircraft systems, refuelling vehicles, pipeline systems and much more) are of great importance for subsequent certification, as the foundation for a market uptake of sustainable aviation fuels.

To enlarge the array of sustainable feedstocks and applications and push further the use of new aviation fuels and combustion technologies for finding effective solutions to emerging socio-economic needs, researchers and innovators need the most advanced research and testing facilities.

The research infrastructures in the field including those relevant for adaption and expansion of existing test combustion capabilities to use new fuels for future propulsion systems, referee-test rigs for the assessment of the potential and characteristics of sustainable aviation fuels in respect to safety and reliability and test rigs that support the approval and qualification of SAF candidates entering ASTM D4054 (Tier 2.5) should build on past integration of access to their facilities in previous Framework Programmes and reach an higher and more interdisciplinary level of integration to offer access, through a single entry point, to a coherent and complementary set of services, customising and combining them when necessary, to support academic and industrial research teams.

Proposals could consider, for their inclusion in the service portfolio, relevant services and expertise offered by the European Commission's Joint Research Centre (JRC).

HORIZON-INFRA-2025-01-SERV-03: Research infrastructure services advancing frontier knowledge

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants are not required to include in their proposal a plan for the exploitation and dissemination of the results as the main objective of</p>

	<p>these actions is the service provision.</p> <p>As proposals need to give information on the research infrastructures providing access, the page limit of the application is 100 pages.</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <p>Given the specific nature of this topic, access provision activities must be included in the proposal. Please read carefully the provisions under the section “Specific features for Research Infrastructures” of this work programme part before preparing your application.</p> <p>Considering the Union’s interest to make accessible to its researchers the most advanced research infrastructures, wherever they are in the world, legal entities established in Australia, Brazil, Canada, Chile, India, Japan, Mexico, New Zealand, Republic of Korea, Singapore, Switzerland, and USA, which provide, under the grant, access to their research infrastructures to researchers from Member States and Associated Countries, are exceptionally eligible for funding from the Union under this topic.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The following additions to the general award criteria apply:</p> <p><i>For the 'Excellence' criterion</i>, the additional following aspects will also be taken into account:</p> <ul style="list-style-type: none"> • The extent to which the access activities (trans-national and/or virtual access) will offer access to the state-of-the-art infrastructures of European interest in the field, high quality services, and will enable users to conduct excellent research. • The extent to which the project will contribute to facilitating and integrating the access procedures, to improve the services the infrastructures provide and to further develop their on-line services.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering the different areas, grants will be awarded to applications not only in order of ranking but at least also to those proposals that are the highest ranked within each area, provided that the applications attain all thresholds.</p>

<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>The funding rate is 80% of the eligible costs.</p> <p>Eligible costs may take form of unit costs for trans-national and virtual access to research infrastructures as defined in the Decision authorising the use of unit costs for the actions involving trans-national and virtual access (see Annex 2a of the Horizon Europe Model Grant Agreement).</p>
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Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

- Wider, simplified, and more efficient access to the best research infrastructures available to researchers to conduct curiosity-driven research, irrespective of location;
- Breakthrough and leading-edge research enabled by advanced research infrastructure services, including from emerging facilities, made available to a wider user community, including in emerging areas of research;
- Improved and harmonised research infrastructure services and broader and more balanced use of research infrastructure resources across the EU and Associated Countries deriving from the exploitation of synergies and complementarities;
- A new generation of researchers trained to optimally exploit all the essential tools for their research;
- Cross-disciplinary fertilisations and a wider sharing of information, knowledge and technologies across scientific fields fostered by closer interactions between researchers active in and around research infrastructures;
- Better management, including implementing FAIR data principle, of the continuous flow of data collected or produced by research infrastructures.

Scope:

This topic aims at providing trans-national access (on-site or remote) and/or virtual access to integrated and customised research infrastructure services for curiosity-driven research in wide scientific domains, offered by a wide range of complementary and interdisciplinary top level research infrastructures. Given the funding rate, the topic also aims at fostering the sustainability of the access scheme. Proposals are expected to address one domain area and must explicitly state which area they address.

The scientific domains covered under this topic are:

- Area 1: Environment: atmospheric chemistry and dynamics.
- Area 2: Physical sciences and engineering: hadron physics.

For Area 2, proposers should fully exploit transversal links to and identify common developments with neighbouring communities within the field of particle and nuclear physics building on the work of recent Horizon projects where applicable.

Access also includes ad hoc users' training and scientific and technical support. Training courses for using the infrastructures may also be supported. Training courses and ad hoc users' training will prepare the new generations of researchers to properly exploit leading-edge research infrastructures, and should provide them with appropriate skills for data stewardship.

Activities to facilitate and integrate the access procedures, to further develop the remote or virtual provision of services and to improve, customise and harmonise the services the infrastructures will also be supported.

The main goal of this topic is access provision to existing services: this should be clearly reflected by the proposed activities and the allocated resources. The improvement and optimisation of the offered services and the development of new services, relevant to specific scientific challenges in the identified domains, can also be supported, including joint/cross-research infrastructure services, provided that the resulting services are opened and offered already under the actions (short-term R&D) and that the long-term sustainability of such services is ensured by the participant research infrastructures. This topic will not support longer-term R&D for new instrumentation, tools, methods and advanced digital solutions.

Proposals should adhere to the guidelines and principles of the European Charter for Access to Research Infrastructures⁶⁵.

Data management (and related ethics issues), interoperability, as well as the connection of digital services (e.g. data services) to the European Open Science Cloud, should be addressed where relevant.

Proposals should take due account of major European or international initiatives relevant in the domain. When appropriate, they should foster the use and deployment of (open) global standards.

Proposals should make available to researchers a very wide, inclusive and comprehensive portfolio of complementary research infrastructure services, including data services, which are relevant for frontier research in the domain. To this extent, they should involve, as beneficiaries, affiliated entities, third parties, or external providers of purchased services, the necessary interdisciplinary set of research infrastructures of European interest⁶⁶ that provide such services, including, if applicable, from emerging facilities.

Proposed actions should ensure that they are strongly linked to research infrastructures of pan-European relevance, as prioritised by ESFRI and the ERICs. Therefore, proposals should

⁶⁵ <https://op.europa.eu/publication-detail/-/publication/ec4692ae-ac6f-11ef-acb1-01aa75ed71a1>

⁶⁶ A research infrastructure is of European interest when is able to attract users from EU or associated countries other than the country where the infrastructure is located. This includes ESFRI and ERIC infrastructures.

include at least one ESFRI Landmark⁶⁷ or European Research Infrastructure Consortium (ERIC)⁶⁸ as beneficiary. In case of a distributed⁶⁹ ERIC, as an alternative to the ERIC participating as a beneficiary, a legal entity that is hosting ERIC facilities, resources or related services may participate as a beneficiary. A declaration signed by the legal representative of the ERIC should confirm that the ERIC is supporting this participation, explain the relevance for the ERIC and describe any further cooperation with the ERIC.

Access could also be open, in accordance with the ‘Specific Features for Research Infrastructure’ section of this Work Programme, to third countries’ researchers to work on global scientific challenges. Research infrastructures from third countries⁷⁰ may be involved when appropriate. However, such research infrastructures should only be involved, as beneficiaries or affiliated entities, if they offer complementary or more advanced services than those available in the EU Member States and Associated Countries.

Proposals should include an outreach and engagement plan to actively advertise their services to the research communities, notably from Widening countries in the specific domains.

Proposals are expected to exploit synergies and to ensure complementarity and coherence with other EU grants supporting access provision.

Proposals should include the list of services/installations⁷¹ opened by research infrastructures for trans-national or virtual access and the amounts of units of access made available for users. Further conditions and requirements relating to access provisions that applicants should fulfil when drafting a proposal are given in the “Specific features for Research Infrastructures” section of this work programme part. Compliance with these provisions will be taken into account during evaluation. In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

HORIZON-INFRA-2025-01-SERV-04: Research infrastructure services advancing frontier knowledge (bottom-up)

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

⁶⁷ See lists of ESFRI ‘Landmarks’ in the 2021 ESFRI Roadmap on [https://roadmap2021.esfri.eu/European_Research_Infrastructure_Consortium_\(ERIC\)_|_European_Commission_\(europa.eu\)](https://roadmap2021.esfri.eu/European_Research_Infrastructure_Consortium_(ERIC)_|_European_Commission_(europa.eu))

⁶⁸ The term ‘distributed’ research infrastructure typically refers to one or a few central hubs and several interlinked (national or institutional) nodes where many components of the research infrastructure may not be part of the same legal entity, the ERIC.

⁶⁹ See the Eligibility conditions for this topic.

⁷⁰ “Installation” means a part or a service of a research infrastructure that can be used independently from the rest. A research infrastructure consists of one or more installations.

Horizon Europe - Work Programme 2025
Research Infrastructures

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants are not required to include in their proposal a plan for the exploitation and dissemination of the results as the main objective of these actions is the service provision.</p> <p>As proposals need to give information on the research infrastructures providing access, the page limit of the application is 100 pages.</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <p>Given the specific nature of this topic, access provision activities must be included in the proposal. Please read carefully the provisions under the section “Specific features for Research Infrastructures” of this work programme part before preparing your application.</p> <p>Considering the Union’s interest to make accessible to its researchers the most advanced research infrastructures, wherever they are in the world, legal entities established in Australia, Brazil, Canada, Chile, India, Japan, Mexico, New Zealand, Republic of Korea, Singapore, Switzerland, and USA, which provide, under the grant, access to their research infrastructures to researchers from Member States and Associated Countries, are exceptionally eligible for funding from the Union under this topic.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The following additions to the general award criteria apply:</p> <p><i>For the 'Excellence' criterion</i>, the additional following aspects will also be taken into account:</p> <ul style="list-style-type: none"> • The extent to which the access activities (trans-national and/or virtual access) will offer access to the state-of-the-art infrastructures of European interest in the field, high quality services, and will enable users to conduct excellent research. • The extent to which the project will contribute to facilitating and integrating the access procedures, to improve the services the infrastructures provide and to further develop their on-line services.

<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering as many scientific domains⁷² for service provision as possible, grants will be awarded to applications not only in order of ranking but also to proposals that address a scientific domain (and sub-domain if needed) not covered by a higher-ranked proposal, provided that the proposals attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>The funding rate is 80% of the eligible costs.</p> <p>Eligible costs may take form of unit costs for trans-national and virtual access to research infrastructures as defined in the Decision authorising the use of unit costs for the actions involving trans-national and virtual access (see Annex 2a of the Horizon Europe Model Grant Agreement).</p>

Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

- Wider, simplified, and more efficient access to the best research infrastructures available to researchers to conduct curiosity-driven research, irrespective of location;
- Breakthrough and leading-edge research enabled by advanced research infrastructure services, including from emerging facilities, made available to a wider user community, including in emerging areas of research;
- Improved and harmonised research infrastructure services and broader and more balanced use of research infrastructure resources across the EU and Associated Countries deriving from the exploitation of synergies and complementarities;
- A new generation of researchers trained to optimally exploit all the essential tools for their research;
- Cross-disciplinary fertilisations and a wider sharing of information, knowledge and technologies across scientific fields fostered by closer interactions between researchers active in and around research infrastructures;
- Better management, including implementing FAIR data principle, of the continuous flow of data collected or produced by research infrastructures.

Scope: This topic aims at providing trans-national access (on-site or remote) and/or virtual access to integrated and customised research infrastructure services for curiosity-driven

⁷² As defined in [2021 ESFRI Roadmap](#): 1. Data, Computing and Digital Research Infrastructures; 2. Energy; 3. Environment; 4. Health & Food; 5. Physical Sciences and Engineering; 6. Social Sciences & Humanities.

research in wide scientific domains, offered by a wide range of complementary and interdisciplinary top level research infrastructures. Given the funding rate, the topic also aims at fostering the sustainability of the access scheme. Proposals are expected to address one domain and must explicitly state which domain (and sub-domain if appropriate) they address among the scientific domains not covered by Horizon Europe Research Infrastructures part of Work Programme 2023 to 2025, curiosity- driven INFRASERV topics⁷³.

Access also includes ad hoc users' training and scientific and technical support. Training courses for using the infrastructures may also be supported. Training courses and ad hoc users' training will prepare the new generations of researchers to properly exploit leading-edge research infrastructures, and should provide them with appropriate skills for data stewardship.

Activities to facilitate and integrate the access procedures, to further develop the remote or virtual provision of services and to improve, customise and harmonise the services the infrastructures will also be supported.

The main goal of this topic is access provision to existing services: this should be clearly reflected by the proposed activities and the allocated resources. The improvement and optimisation of the offered services and the development of new services, relevant to specific scientific challenges in the identified domains, can also be supported, including joint/cross-research infrastructure services, provided that the resulting services are opened and offered already under the actions (short-term R&D) and that the long-term sustainability of such services is ensured by the participant research infrastructures. This topic will not support longer-term R&D for new instrumentation, tools, methods and advanced digital solutions.

Proposals should adhere to the guidelines and principles of the European Charter for Access to Research Infrastructures⁷⁴

Data management (and related ethics issues), interoperability, as well as the connection of digital services (e.g. data services) to the European Open Science Cloud, should be addressed where relevant.

Proposals should take due account of major European or international initiatives relevant in the domain. When appropriate, they should foster the use and deployment of (open) global standards.

Proposals should make available to researchers a very wide, inclusive and comprehensive portfolio of complementary research infrastructure services, including data services, which are relevant for frontier research in the domain. To this extent, they should involve, as beneficiaries, affiliated entities, third parties, or external providers of purchased services, the

⁷³ Therefore, excluding the following domains/sub-domains: Environment/Biosphere: terrestrial biodiversity and ecosystems, including forest; Physical sciences and engineering/Astronomy and Astroparticle physics; Arts and Humanities; Environment / atmospheric chemistry and dynamics; Physical sciences and engineering:/ particle and nuclear physics.

⁷⁴ <https://op.europa.eu/en/publication-detail/-/publication/ec4692ae-ac6f-11ef-acb1-01aa75ed71a1>

necessary interdisciplinary set of research infrastructures of European interest⁷⁵ that provide such services, including, if applicable, from emerging facilities.

Proposed actions should ensure that they are strongly linked to research infrastructures of pan-European relevance, as prioritised by ESFRI and the ERICs. Therefore, proposals should include at least one ESFRI Landmark⁷⁶ or European Research Infrastructure Consortium (ERIC)⁷⁷ as beneficiary. In case of a distributed⁷⁸ ERIC, as an alternative to the ERIC participating as a beneficiary, a legal entity that is hosting ERIC facilities, resources or related services may participate as a beneficiary. A declaration signed by the legal representative of the ERIC should confirm that the ERIC is supporting this participation, explain the relevance for the ERIC and describe any further cooperation with the ERIC.

Access could also be open, in accordance with the ‘Specific Features for Research Infrastructure’ section of this Work Programme, to third countries’ researchers to work on global scientific challenges. Research infrastructures from third countries⁷⁹ may be involved when appropriate. However, such research infrastructures should only be involved, as beneficiaries or affiliated entities, if they offer complementary or more advanced services than those available in the EU Member States and Associated Countries.

Proposals should include an outreach and engagement plan to actively advertise their services to the research communities, notably from Widening countries in the specific domains.

Proposals are expected to exploit synergies and to ensure complementarity and coherence with other EU grants supporting access provision.

Proposals should include the list of services/installations⁸⁰ opened by research infrastructures for trans-national or virtual access and the amounts of units of access made available for users. Further conditions and requirements relating to access provisions that applicants should fulfil when drafting a proposal are given in the “Specific features for Research Infrastructures” section of this work programme part. Compliance with these provisions will be taken into account during evaluation. In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

⁷⁵ A research infrastructure is of European interest when is able to attract users from EU or associated countries other than the country where the infrastructure is located. This includes ESFRI and ERIC infrastructures.

⁷⁶ See lists of ESFRI ‘Landmarks’ in the 2021 ESFRI Roadmap on <https://roadmap2021.esfri.eu/>
⁷⁷ [European Research Infrastructure Consortium \(ERIC\) | European Commission \(europa.eu\)](https://roadmap2021.esfri.eu/)

⁷⁸ The term ‘distributed’ research infrastructure typically refers to one or a few central hubs and several interlinked (national or institutional) nodes where many components of the research infrastructure may not be part of the same legal entity, the ERIC.

⁷⁹ See the Eligibility conditions for this topic.

⁸⁰ “Installation” means a part or a service of a research infrastructure that can be used independently from the rest. A research infrastructure consists of one or more installations.

Destination INFRATECH - Next generation of scientific instrumentation, tools, methods, and advanced digital solutions of research infrastructures and foster innovation and co-creation with industry (2025)

Research infrastructures require constant technology development to maintain and upgrade their services and to create new ones. The manufacturing capacity of industry is often required for this, and the co-creation of technological components is a defining feature of many research infrastructures.

The expected impact of the activities supported under this part of the destination notably includes:

- Reinforced EU resilience with respect to the availability of critical technical research infrastructure components, considering that research infrastructure operations rely in many cases on technical components or material for which Europe is strongly dependent on third countries.
- More robust research infrastructure innovation ecosystems, building also on activities funded in the past on the development of research infrastructure technology roadmaps and co-creation activities with industry.
- Accelerated digitalisation of research infrastructures throughout their entire life cycle.
- Greening of research infrastructures, by advancing and accelerating the reduction of the environmental footprint of research infrastructures operations, while at the same time contributing to increasing their resilience towards energy crises or other resource restrictions such as water.
- The development of more robust research infrastructure innovation ecosystems, including the development and implementation of common research infrastructure technology roadmaps.

Destination Earth (DestinE) is a flagship initiative aiming to develop a highly- accurate, interactive digital model of the Earth to model, monitor and simulate natural phenomena, hazards and the related human activities. DestinE will provide an operational system to support decision-makers in designing accurate and actionable climate change adaptation strategies and mitigation measures.

The expected impact of the activities supported under this part of the destination notably includes:

- Exploitation of the rapid advances in modelling, observations, digital technologies and ML/AI, ensuring that European leadership in this field is maintained;
- Verification of modelling results using observations of research infrastructures in relevant fields;

- New Digital Twins and use cases to cover unexplored areas/domains, becoming part of the overall ecosystem, addressing EU priorities and evolving end-user needs; multi-disciplinary, horizontal, transversal infrastructure solutions to handle diverse end-to-end workflows spanning various areas.

Proposals are invited against the following topic(s):

HORIZON-INFRA-2025-01-TECH-01: New technologies and solutions for reducing the environmental and climate footprint of research infrastructures

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 25.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply: due to the specific nature of this topic, proposals must include at least two different research infrastructures as beneficiaries⁸¹, each of them being an ESFRI Landmark⁸², a European Research Infrastructure Consortium (ERIC)⁸³ or another research infrastructure that is an international European research organisation⁸⁴. Such research infrastructures, and where applicable the beneficiaries that own/operate them, must be explicitly identified in the proposals.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions</p>

⁸¹ The participation of two nodes of the same ESFRI infrastructure or ERIC does not count as two different research infrastructures.

⁸² See the list of ESFRI 'Landmarks' in the 2021 ESFRI Roadmap: <https://roadmap2021.esfri.eu/>

⁸³ [European Research Infrastructure Consortium \(ERIC\) | European Commission \(europa.eu\)](https://roadmap2021.esfri.eu/)

⁸⁴ An 'international European research organisation' means an international organisation, the majority of whose members are Member States or associated countries, whose principal objective is to promote scientific and technological cooperation in Europe.

	under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁸⁵ .
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Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

- reduction of environmental (including climate-related) impacts;
- optimisation of resource and energy consumption integrated through the full life cycle of research infrastructures;
- increased long-term sustainability of the European research infrastructures ecosystem.

Scope: The aim of this topic is to deliver innovative technologies and solutions which generate a step change in reducing the environmental and climate footprint of research infrastructures through the full life cycle of research infrastructures. Proposals should identify common methodologies, among the concerned research infrastructures, to assess environmental impact and strategies to reduce it, as well as efficiency gains in the broader ecosystem.

The proposed action is expected to deliver on several of the following points, as relevant:

- new technologies and solutions for research infrastructures enabling transformative resource efficiency (e.g. reduced energy consumption) and reduction of environmental (including climate-related) impacts, including, when relevant, more sustainable and efficient ways of collecting, processing and providing access to data;
- validation and prototyping;
- training of research infrastructures staff for the operation and use of the new solutions;
- action plans to deploy new developments at wider scale and ensure their sustainability;
- measures to ensure an environmentally effective integration of the solutions in the local contexts;
- societal engagement to harvest and incorporate solutions from other relevant ecosystems and or to foster acceptance of the solutions in the local and regional communities.

Consortia should be built on a leading core of at least two different world-class research infrastructures, each of them being an ESFRI infrastructure, a European Research Infrastructure Consortium (ERIC) or another research infrastructure that is an

⁸⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

intergovernmental organisation of European interest, and can include a wider set of research infrastructures, and other technological partners.

Proposals should explain any synergies and complementarities with any related previous or current EU grants, including grants funded under other parts of Horizon Europe or Horizon 2020. Where relevant, proposals should ensure complementarity with actions funded under the 2023 call topic HORIZON-INFRA-2023-TECH-01-01 and clearly justify that different technologies and solutions are targeted.

Proposals could consider the inclusion of the European Commission's Joint Research Centre (JRC) Support Services Directorate in their research infrastructure portfolio. The JRC offers its experience in assessing, setting the strategy, maintaining, operating and providing access to external researchers to its research infrastructures in various fields of science. One of the main pillars of JRC's strategy is ensuring the sustainability of its research infrastructures, with measures to reduce energy consumption, improve energy efficiency, and promote the use of renewable energy sources. In this regard, the JRC will consider collaborating with any successful proposal.

HORIZON-INFRA-2025-01-TECH-02: Implementing research infrastructure technology roadmaps

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 45.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: due to the specific nature of this topic, proposals must include at least two different research infrastructures as beneficiaries⁸⁶, each of them being an ESFRI Landmark⁸⁷, a European Research Infrastructure Consortium (ERIC)⁸⁸</p>

⁸⁶ The participation of two nodes of the same ESFRI infrastructure or ERIC does not count as two different research infrastructures.

⁸⁷ See the list of ESFRI 'Landmarks' in the 2021 ESFRI Roadmap: <https://roadmap2021.esfri.eu/>

⁸⁸ [European Research Infrastructure Consortium \(ERIC\) | European Commission \(europa.eu\)](#)

	or another research infrastructure that is an international European research organisation ⁸⁹ . Such research infrastructures, and where applicable the beneficiaries that own/operate them, must be explicitly identified in the proposals.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. Given the type of action (e.g. limited number of choices in specific technology fields) and its level of ambition, the maximum amount that can be granted to each third party may exceed the standard limit of EUR 60 000 if duly justified in the proposal.</p>

Expected Outcome: Project results are expected to contribute to several of the following expected outcomes:

- enhanced scientific and technological competitiveness of European research infrastructures;
- enhanced research infrastructure capacities to address research challenges and EU policy priorities;
- increased technological level of European industries through the co-development of advanced technologies for research infrastructures and creation of potential new markets;
- increased availability of research infrastructure component manufacturing capabilities currently not available in Europe;
- long-term integration of research infrastructures into local, regional and global research and innovation ecosystems;
- strengthened foundations for the development of innovative companies in Europe.

Scope: Research infrastructures require constant technology development to maintain and upgrade their services and to create new ones, to keep pace with the advancements of research and meet the requirements of emerging user communities from academia and innovation ecosystems. The manufacturing capacity of industry, including SMEs, is often required for this, and the co-creation of technological components is a defining feature of many research infrastructures. In some cases, manufacturing capabilities are lacking inside the EU, putting Europe's technological sovereignty at stake.

⁸⁹ An 'international European research organisation' means an international organisation, the majority of whose members are Member States or associated countries, whose principal objective is to promote scientific and technological cooperation in Europe.

Several research infrastructure and technology communities, such as the accelerator, light source, or astronomy communities, have already developed research infrastructure technology roadmaps that identify key components necessary to maintain Europe's leading position in research infrastructure technologies.

Projects should implement significant parts of, or entire existing research infrastructure technology roadmaps through co-creation with industrial partners from the earliest possible stage. The technology roadmaps should be the result of a community or cross-community effort already undertaken, and they should not be the result of an isolated effort, e.g., of a single research infrastructure. The technological solutions developed should respond to the needs of several research infrastructures, and in some cases the needs of different types of research infrastructures.

Proposals are expected to involve research infrastructures and industrial partners, including SMEs, or other technological partners, to promote innovation and knowledge sharing through co-creation of required technological solutions and, when appropriate, make use of large-scale platforms combining R&D, integration and validation for technological developments. While industry, including SMEs, or other technological partners do not need to be consortium members, proposals should show evidence of their commitment via engagement letters or other forms of endorsement. If applicable, proposals should describe how such partners will be identified in the course of the action.

Furthermore, proposals should contribute to fostering the innovation potential of research infrastructures by reinforcing the partnership with industry, through e.g. transfer of knowledge and other dissemination activities.

Proposals should address the following aspects as well:

- development of identified fundamental technologies or techniques underpinning and arising from the efficient and joint use of the involved research infrastructures, taking into account resource efficiency (e.g. raw material and energy consumption) and environmental (including climate-related) impacts.
- prototyping of high-performance methodologies, protocols, and instrumentation, including the testing of components, subsystems, materials, and dedicated software, needed to upgrade the involved research infrastructures, construct their next generation, or develop new advanced applications.

Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. Given the type of action (e.g. limited number of choices in specific technology fields) and its level of ambition, the maximum amount that can be granted to each third party may exceed the standard limit of EUR 60 000 if duly justified in the proposal.

Proposals may also include Pre-Commercial Procurement (PCP) subcontracting activities. This option encourages the use of public procurements for the competitive development of new specific solutions, whilst opening market opportunities for industry, including SMEs, and

researchers active in Europe. By establishing the procurement process in consecutive phases, the PCP activity can support the development of competing designs, prototypes, and solution testing. This ensures that investment risks do not prevent tackling specific scientific and technological issues and allows to approach a problem from different angles and to test different solutions.

When appropriate, proposals should also build on results from past/ongoing projects such as the ones funded under Horizon 2020 topics INFRAINNOV-03-2020 and INFRAINNOV-04-2020, and under Horizon Europe topics HORIZON-INFRA-2022-TECH-01-01 and HORIZON-INFRA-2024-TECH-01-01 and avoid overlap with them.

HORIZON-INFRA-2025-01-TECH-03: AI-powered impact simulations in support of the Destination Earth initiative

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 7.00 and 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Subject to restrictions for the protection of European communication networks.</p> <p>The following additional eligibility criteria apply:</p> <p>If projects make use of weather and/or climate predictions or related data and services, beneficiaries should make use of the European Commission's Destination Earth initiative⁹⁰ and engage with the relevant community.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology</i>	Activities are expected to achieve TRL 7 or higher by the end of the

⁹⁰ See <https://destination-earth.eu/>. Access to the DestinE system can be requested through <https://platform.destine.eu/services/>

<i>Readiness Level</i>	project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁹¹.</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Innovative use of AI, in line with the GenAI4Eu initiative⁹², and other key EU initiatives like the Apply AI strategy, to generate powerful local impact assessments on top of large-scale scenarios provided by digital twins demonstrated with fusion of real time data feeds, triggering available services and visualisations.
- Novel interfaces that translate the non-technical requirements of the users into concrete scenario assessments tailored for local needs.
- New best practices and guidelines on impact assessment of digital twin simulation and AI powered analysis are established.

Scope: Informed decision-making involves an increasing number of data sources, including high quality data from research infrastructures, and simulations. While the concept of Digital Twins in Earth Systems promises an increased interactivity for users to run various future impact scenarios, the complexity of such setups is challenging. Initiatives like Destination Earth (DestinE) have shown to generate massive data amounts that cannot be easily moved and therefore need to be processed on the RIs where they reside. AI solutions can help with complex data management activities but also benefit from the available data and compute resources, and combine them efficiently with required simulation services.

The proposals should cover all of the following aspects:

- Demonstrate the innovative use of AI, in line with the GenAI4EU initiative and other key EU initiatives, like the Apply AI strategy, to setup and manage impact assessments

⁹¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁹² This call falls under the ‘GenAI4EU’ initiative as in the Communication from the Commission to the European Parliament, the Council, the European Economic And Social Committee and the Committee of the Regions on boosting startups and innovation in trustworthy artificial intelligence ((COM(2024) 28 final of 24.1.2024).

assisted by simulation activities across RIs. They should ensure efficient selection of data and modelling resources and transparency for the consequent decision-making.

- Exploit the rapid advances in modelling, observations, digital technologies and ML/AI, ensuring that European leadership in this field is maintained;
- Link to existing DestinE Digital Twins and services to cover unexplored areas/domains and explore joining the overall DestinE ecosystem and service offering, addressing Union priorities and evolving end-user needs and create multi-disciplinary, horizontal, transversal infrastructure solutions to handle diverse end-to-end workflows spanning various areas.
- Allow for more informed decision-making by non-technical experts and policy makers through assistance of generative AI models enabling user requirements analysis and narrowing down vast amounts of data and information into actionable and understandable scenarios.
- Demonstrate trustworthiness/reliability in the use of AI and practice clear and open communication of AI use and impact to users.

Additionally, the proposals should also include work on some of the following points:

- Evolve further through science & technology innovation using AI, provide novel digital solutions and capabilities at operational level and accelerate science-technology synergies to achieve breakthroughs in the area of AI-powered Earth system science;
- Invest on the design of a robust development framework and respective pre-operational infrastructure for advanced AI/ML tools and applications, ensuring the quality, reliability, transparency and verifiability (repeatability) of the methods applied and outcomes that are created;
- Expand to new thematic areas and fields based on identified user needs and structured feedback provided by relevant stakeholders and communities.

Proposals are expected to cover various application areas and cover at least three distinct user groups and their impact assessments. The solutions need to demonstrate a sustainable setup answering day-to-day challenges but also be suitable for continuous long-term research. They should demonstrate how the compute capabilities and data on RIs can be made directly usable to users through interactivity with twins, adapting to changing data and on-demand visualisation capabilities.

Proposals should take advantage of the opportunities and developments offered by existing Horizon Europe research and innovation actions (RIA) and innovation actions (IA) developing new simulation and observation capabilities, new and emerging ICT infrastructures (e.g. EuroHPC, AI-on-Demand platform), HPC Centers of Competence and Excellence (such as ESiWACE for weather and climate prediction and ChEESE for solid Earth applications) and the work towards the European Digital Twin of the Ocean. The

proposals should demonstrate a clear and credible pathway towards collaboration with the implementing entities of Destination Earth initiative (European Space Agency (ESA), European Centre for Medium-Range Weather Forecasts (ECMWF) and European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT)) and, when relevant, other key organisations in the field (e.g. Mercator Ocean).

HORIZON-INFRA-2025-01-TECH-04: AI-generated digital twins for science

Call: Research Infrastructures 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 8.00 and 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 or higher by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁹³ .

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

⁹³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Innovative use of artificial intelligence (AI), in line with the GenAI4EU initiative⁹⁴, and other key EU initiatives, like the Apply AI strategy, is demonstrated to setup and manage highly complex modelling and simulation activities across different research infrastructures (RIs).
- New best practices and guidelines for model generation and setup, including simulation and simulation-observation data fusion, are established.
- Emergence of new applications and use cases, in line with the GenAI4EU initiative and other key EU initiatives, like the Apply AI strategy.

Scope: The aim is to use generative artificial intelligence (AI), in line with the GenAI4EU initiative and other key EU initiatives, like the Apply AI strategy, to deliver digital twins of complex real-world systems that advance the state-of-art of European research infrastructures and show transformative potential in their operations. The solutions should pave the way for new methods to conduct research by the RIs through AI generated and powered digital twins. They should propose suitable setups for creation of new digital twins or enhancing existing ones, already available within the scientific communities and relevant research infrastructures and for which an existing baseline on generative Artificial Intelligence models exists, the required data fusions, visualisations and execution of the workflows. The focus is on key impact sectors, such as healthcare (including mental health), transportation, agriculture, environment or manufacturing, or other fields related to the Clean Industrial Deal, in line with the European objectives seeking to leverage AI to address societal challenges, improve public services and drive inclusive economic growth. The proposed solutions, underpinning the provision of improved and advanced future services, should support RIs in new areas of research and/or a wider community of users, including clearly identified and relevant industrial, scientific or policy users and enhance the potential of the RIs in addressing EU's policy objectives and socio-economic challenges. The proposed solutions should, at least in part, be demonstrated in a relevant environment that can lead to sustainable production and include a cost estimate for the operations.

The proposed work is expected to benefit from recent advances in various AI areas, like Foundation Models (e.g. Large Language Models (LLMs)), Federated Learning and link to relevant European AI initiatives, such as the European AI factories⁹⁵, to demonstrate European capabilities to generate large on-demand impact simulations.

Proposals focusing on digital twins for decision-making in the area of the Earth systems and related socio-economic impacts will need to adhere to the standards and best practices set by

⁹⁴ This call falls under the 'GenAI4EU' initiative as in the Communication from the Commission to the European Parliament, the Council, the European Economic And Social Committee and the Committee of the Regions on boosting startups and innovation in trustworthy artificial intelligence ((COM(2024) 28 final of 24.1.2024).

⁹⁵ <https://digital-strategy.ec.europa.eu/en/policies/ai-factories>

the Destination Earth⁹⁶ initiative of the European Commission to allow coupling of new digital twins with the existing Destination Earth system.

The proposals should cover all of the following aspects:

- Demonstrate the ability to setup complex modelling and digital twin setups using generative AI in line with the GenAI4EU initiative and other key EU initiatives, like the Apply AI strategy.
- Ensure a data driven approach in which new simulations and Digital Twins are set up and demonstrate the chosen approach to work in at least three different application scenarios.
- Enable non-technical decision makers to express scenarios for challenges to be translated into impactful simulations, making use of existing digital twins, models and data sources.
- Demonstrate trustworthiness/reliability in the use of AI and practice clear and open communication of AI use and impact to users.

Additionally, the proposals should also include work on some of the following points:

- Best practices to use AI to generate digital twins and their setup.
- Contribute to the European AI Factories and their abilities to facilitate large scale AI setups.
- Demonstrate that proposed solutions work for at least two different scientific domains to highlight common principles and best practices in this approach.

Proposals should take advantage of the opportunities and developments offered by existing Horizon Europe research and innovation actions (RIA) developing new simulation and observation capabilities, the Horizon Europe CSA HORIZON-CL4-2025-03-HUMAN-18: GenAI4EU central Hub, and new and emerging ICT infrastructures (e.g. EuroHPC and the AI-on-demand platform). Successful proposals in the energy-intensive industrial transition field will be encouraged to closely cooperate with the European Commission's Joint Research Centre (JRC) to foster coordination with on-going related activities.

⁹⁶ <https://digital-strategy.ec.europa.eu/en/policies/destination-earth>

Other Actions not subject to calls for proposals

Grants to Identified Beneficiaries

1. International Conference on Research Infrastructures – ICRI 2026

Expected outcome:

The project is expected to contribute to all the following outcomes:

- Contribution to address research infrastructure challenges with a global dimension;
- Increased capacity of the EU to respond, in cooperation with international players, to challenges at global level;
- Development of further cooperation with key international partners on research infrastructures;
- Enhanced role of the Union in international organisations and multilateral fora;
- Progress towards the development of global research infrastructures.

Scope:

The International Conference on Research Infrastructures (ICRI) is organised in an EU Member States or in a non-EU country, in cooperation with the European Commission. The next ICRI Conference is planned in the second semester 2026 in Italy.

ICRI 2026 will contribute to the objectives of the Research Infrastructures Work Programme. The specific objectives of the conference include:

- (1) to provide an international forum for the discussion on the development of global research infrastructures, in particular, on issues of common interest such as data sharing, digitisation of RIs, common standards, transnational access, the long-term sustainability of research infrastructures and their innovation potential;
- (2) to facilitate dialogue and strategic collaboration between European research infrastructures and their international counterparts;
- (3) to address the role of international research infrastructures collaboration in tackling global challenges and fostering the achievement of the UN Sustainable Development Goals;

This grant will be awarded without a call for proposals according to Article 198(e) of the Financial Regulation and Article 24(3)(b) of the Horizon Europe Regulation to the legal entities identified below, as they have been designated by the country hosting this event organised in cooperation with the Commission.

Specific conditions

Procedure: The evaluation committee will be fully composed of representatives of EU institutions.

Indicative timetable: Fourth quarter of 2025

Legal entities:

Responsible ministry or agency of Italy, or a legal entity designated by it. Consiglio Nazionale delle Ricerche, Piazzale Aldo Moro 7, 00185 Roma, Italy.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative budget: EUR 0.30 million from the 2025 budget

2. Danish Presidency conference on research infrastructures

Expected outcomes:

The conference will contribute to the following outcomes:

- Increased focus on infrastructures for research and innovation as strategic assets of the European Research Area.
- Contributions to streamlining priorities for European investments in the European landscape of research infrastructures, also considering the policy agenda on technology infrastructures.
- Maximising the exploitation of the innovation potential of complementary infrastructures for research and innovation in supporting EU priorities on, e.g. green and digital transitions, and in ensuring EU strategic autonomy and strengthened competitiveness and resilience.

Scope:

Taking stock of developments notably as regards the ERA Policy Agenda actions on research infrastructures and technology infrastructures, the event would explore their value for the achievement of key EU political objectives such as research and innovation for the green energy, circular materials and digital transition, and for strategic autonomy and a more competitive and resilient society and economy.

The event would also provide an opportunity to discuss upcoming priorities and activities on research infrastructures and technology infrastructures to maximise their impact, notably by fostering synergies and complementarities.

This grant will be awarded without a call for proposals, according to Article 198(e) of the Financial Regulation and Article 24(3)(b) of the Horizon Europe Regulation, to the legal entity identified below.

Specific conditions

Legal and financial set-up of the Grant Agreements:

The rules are described in General Annex G. The following exception apply:

- Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025)⁹⁷

Procedure: The evaluation committee will be fully composed by representatives of EU institutions.

Indicative timetable: Second quarter of 2025.

Legal entities:

Responsible ministry or agency of Denmark, or a legal entity designated by it.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative budget: EUR 0.15 million from the 2025 budget

3. Action to support Gazan researchers

The action will aim at developing an extensive mapping exercise to identify existing regional and local initiatives, potential beneficiaries (Gazan researchers, displaced or in-situ), and

⁹⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

stakeholders that could support Gazan researchers. This will be complemented by a pilot initiative to provide immediate support to an initial cohort of 50 Gazan researchers through a Virtual Research Collaboration Hub.

The hub will serve as a digital platform offering mentorship, collaboration opportunities, and access to academic resources. In parallel, engagement with European and international research networks will be fostered to start re-integrating Gazan researchers into the global scientific community.

Toward the end of the action, a feasibility assessment will be conducted to analyse insights from the overall mapping and stakeholder consultations. This assessment will provide firsthand perspectives on challenges, opportunities, and areas needing strategic intervention, culminating in an assessment report produced between months 16 and 18. The report will serve as base to orientate the design of a larger intervention.

Expected Outcomes: Project results are expected to contribute to all the following outcomes:

- Inventory of existing initiatives – A structured database of ongoing regional and local initiatives, identifying potential beneficiaries (Gazan researchers) and key stakeholders to serve as a reference for designing targeted interventions in the upcoming phases.
- Mapping of data-driven insights – A comprehensive analysis that helps prioritise research and innovation (R&I) cooperation areas requiring urgent attention, enabling a more informed allocation of resources to maximise impact.
- Recommendations for further engagement – A set of well-researched recommendations for refining engagement strategies, ensuring alignment with key priorities, and fostering more effective collaboration with stakeholders.
- First pilot action for 50 researchers in an existing Virtual Research Collaboration Hub. The access to the hub will be granted to researchers from Gaza to collaborate with peers globally. It will offer tools for joint research, data sharing, and remote access to international academic resources, such as journals and databases.
- A feasibility assessment report, will present insights derived from the overall mapping and stakeholder consultations and will serve as a foundational resource for designing a larger intervention.

Expected Impact:

Proposals should set out a credible pathway to contributing to all the following impacts:

- Continuity of research activities in Gaza and among displaced Gazan researchers.
- Strengthened international research collaborations involving Gaza's academic community.

Scope:

The mapping exercise will encompass a wide range of regional and local initiatives across multiple sectors, ensuring a holistic understanding of the engagement landscape. It will involve data collection from various available sources. The scope will also include stakeholder consultations to gain firsthand insights into challenges, opportunities, and areas requiring strategic intervention.

The action will serve as a foundation for future strategic planning by developing a dynamic and adaptable framework for continuous assessment. The findings will be utilised to refine policies, allocate resources more efficiently, and create collaborative networks that enhance the overall effectiveness of engagement and intervention efforts. Additionally, the action will identify the target groups necessary to extend the action in the next phase.

The pilot initiative to deliver immediate support to an initial group of 50 Gazan researchers through an existing virtual research collaboration hub could start in the last period of the mapping phase (month 12). The hub will act as a digital platform providing mentorship, collaborative research opportunities, and access to academic resources. At the same time, the initiative will strengthen connections with European and international research networks to facilitate the reintegration of Gazan researchers into the global scientific community.

The insights gained from this initial phase will help shape a more extensive intervention and a feasibility assessment report to be produced between months 16 and 18 will analyse key challenges, opportunities, and areas requiring strategic intervention to provide solid foundation for designing a larger intervention.

The Commission considers that a duration of 18 Months for this action would be appropriate.

This grant will be awarded without a call for proposals, according to Article 198(e) of the Financial Regulation and Article 24(3)(b) of the Horizon Europe Regulation, to the legal entity identified below.

Specific conditions

Legal and financial set-up of the Grant Agreements: The rules are described in General Annex G.

Procedure: The evaluation committee will be fully composed by representatives of EU institutions.

Legal entities:

UNIMED – Mediterranean Universities Union is a network of Higher Education and Research Institutions, active in promoting academic cooperation in the Euro-Mediterranean region and in Sub-Saharan Africa, in Middle East and in Western Balkans. UNIMED is a permanent stakeholder of the European Commission and the Union for the Mediterranean

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: 2025-2026

Indicative budget: EUR 1.00 million from the 2025 budget

Public procurement

1. Support for EOSC EU Node Service Verification and Validation activities

Expected Outcome:

The requested personnel of the external service provider shall contribute to the evaluation and validation of the service components against the defined requirements and agreed roadmaps, verification and validation of the service, and system integration against defined industry standards and EOSC Platform specifications (upon which the EOSC EU Node has been built), examination of outputs produced by the implementation Contractor(s) as well as testing activities to confirm that system components are functional as designed.

The procurement will be using the existing TMII Framework Contract of DG DIGIT.

Scope:

In close collaboration with other Commission services and its customers, the Operating DG./Unit builds and operates solutions for a fully operational enabling infrastructure for EOSC – referred to as the EOSC EU Node – providing access to a rich portfolio of FAIR (Findable, Accessible, Interoperable, Reusable) data and professional quality interoperable services in all relevant domains from data handling to computing, processing, analysis and storing.

The main tasks for the external contractors are on one hand to support the Operating DG./Unit internally managing the service delivery, deployment and operations with special focus on the IT Governance process of the Commission and relevant policy and security compliance tasks, and on the other hand to monitor the third-party contractors directly, verifying and validating the services delivered against KPIs, SLR/SLA requirements (fit for use), as well as users' needs (fit for purpose).

Following EOSC specific tasks will be contributed by the personnel of the external service provider:

- Engage with the Operating DG./Unit, EC stakeholders and the EOSC EU Node Contractor(s) about opportunities to reuse existing solutions or services.

- Engage with the Operating DG/Unit concerning the IT Governance process and associated documents as “Project Charter”, “Architecture Canvas”, “Security Plan” etc. as per PM2 methodology.
- Continuous follow-up of EOSC EU Node Contractor(s)’ activities, SLRs, SLAs, milestones, and deliverables.
- Ensure the quality, efficiency, and effectiveness of EOSC EU Node services against requirements and EOSC's user community feedback.
- Check EOSC EU Node services through individual components and integration tests, including automatic testing of API end points, and performance and end-to-end testing (i.e., via online dashboard)
- Ensure EOSC EU Node’s capacity management is properly addressed:
 - o monitor capacity and performance data;
 - o investigate capacity issues.
- Ensure that a repository of architecture and deployment documentation of the environments rolled out by the three EOSC EU Node Contractor(s) is always available and properly maintained.
- Check services are available to users:
 - o analyse availability data;
 - o investigate service unavailability.
- Report back on user and community feedback.
- Liaise and organize coordination meetings with the Operating DG/Unit.
- Monitor and maintain live online dashboard for the Operating DG/Unit.
- Produce minimum quarterly service status reports for the Operating DG/Unit.

Following specific expertise is mandatory for the performance of tasks:

- There will be a collaborating relationship between the external contractor and the managed service providers of the EOSC EU Node (i.e., EOSC EU Node Contractor(s)), where both set of Contractor(s) add direct value to the overall service quality.
- The external contractor shall be able to assess the software tools proposed by the EOSC EU Node Contractor(s) to fulfil the functional and service level specifications of the procurement, as well as the cloud-based service delivery model (hosting and operations) requirement, for code quality, licensing, pre-existing IPR, service quality, and deployment, among others.

- The external contractor shall be able to apply state-of-the-art Software Audit Reviews & Software Quality Assessments based on industry standard maturity frameworks. Some notable service/software quality assurance standards include ISO 9000 family, Capability Maturity Model Integration, and Test Maturity Model integration.
- The external contractor shall be able to collect and summarize EOSC user community feedback (based on information provided by the EOSC EU Node services Contractor(s)) to assess the fitness of EOSC EU Node services to the users, and to assist future planning.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 1.00 million from the 2025 budget

Expert contract actions

1. External expertise 2025

This action will support:

1. The use of appointed independent experts for the evaluation and monitoring of actions (grant agreement, grant decision, public procurement actions, financial instruments, evaluation) funded under Horizon Europe and previous Framework Programmes for Research and Innovation and where appropriate, include ethics checks as well as compliance checks regarding the Gender Equality Plan eligibility criterion. A special allowance of EUR 450/day will be paid to the experts appointed in their personal capacity who act independently and in the public interest.
2. The use of individual experts to advise on, or support, the design and implementation of EU policies on research infrastructures. The activities carried out by the experts will be essential to the development and monitoring of the Union policy and initiatives in this area. The individual experts' tasks will include attending bilateral meetings with Commission services, remote drafting and possible preparatory work. The experts will be highly qualified, specialised, independent experts selected on the basis of their competence and knowledge of the field. A special allowance of EUR 450/day will be paid to the experts appointed in their personal capacity who act independently and in the public interest. This amount is considered to be proportionate to the specific tasks to be assigned to the experts, including the number of meetings to be attended and possible preparatory work.
3. The use of individual experts for the assessment of ERIC applications, as required under the ERIC Regulation⁹⁸. The experts will be highly qualified independent experts selected on the basis of their specific competence. The experts will provide a report for each of

⁹⁸ Council Regulation (EC) No 723/2009 of 25 June 2009 on the Community Legal Framework for a European Research Infrastructure Consortium.

the assessed ERIC application. A special allowance of EUR 450/day will be paid to the experts appointed in their personal capacity who act independently and in the public interest. This amount is considered to be proportionate to the specific tasks to be assigned to the experts.

4. The use of individual experts for the assessment of ESFRI Roadmap applications and the monitoring of ESFRI projects as part of the preparation of the ESFRI 2026 roadmap. The experts will be highly qualified independent experts selected on the basis of their specific competence. The experts will provide a report for each of the assessed ESFRI Roadmap application or ESFRI projects. A special allowance of EUR 450/day will be paid to the experts appointed in their personal capacity who act independently and in the public interest. The amount will be proportionate to the specific tasks to be assigned to the experts.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative budget: EUR 0.20 million from the 2025 budget

Budget⁹⁹

	Budget line(s)	2025 Budget (EUR million)
Calls		
HORIZON-INFRA-2025-01		400.50
	<i>from</i> 01.020103	<i>400.50</i>
Other actions		
Grant awarded without a call for proposals according to Financial Regulation Article 198(e)		1.45
	<i>from</i> 01.020103	<i>1.45</i>
Public procurement		1.00
	<i>from</i> 01.020103	<i>1.00</i>
Expert contract action		0.20
	<i>from</i> 01.020103	<i>0.20</i>
Estimated total budget		403.15

⁹⁹

The budget figures given in this table are rounded to two decimal places.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

Specific Features for Research Infrastructure

This section provides further conditions and requirements on access provision that applicants must comply with, for different topics under the INFRASERV destination of the Research Infrastructures work programme. Compliance with these provisions will also be taken into account during evaluation.

Trans-national and/or virtual access¹⁰⁰ activities.

Trans-national access activities

Trans-national access provision must be implemented as follows:

Trans-national access to infrastructure services offered under the grant is provided 'free of charge' to selected researchers or research teams (user-groups) including from industry. Access activities should be implemented in a coordinated way so as to improve the overall service provision to the research community. Access may be made available to external users, either **in person** ('hands-on'), when the user visits the infrastructure to make use of it, or through the provision to the user of **remote** scientific services, such as the provision of reference materials or samples, the remote access to a high-performance computing facility, the performance of sample analysis or sample deposition.

The research infrastructures must publicise widely the access offered under the grant agreement to ensure that researchers who might wish to have access to the infrastructures are made aware of the possibilities open to them. They must open specific calls to invite researchers to apply for access. The research infrastructures must promote equal opportunities in advertising the access and take into account gender issues when defining the support provided to visitors. They must maintain appropriate documentation to support and justify the amount of access reported. This documentation must include records of the names, nationalities, and home institutions of the users within the research teams, as well as the nature and quantity of access provided to them. To this extent, a unit of access to each infrastructure service/installation¹⁰¹ needs to be identified and precisely defined in the proposal.

The selection of researchers or research teams must be carried out through an independent peer-review evaluation of the research projects (user projects) they wish to carry out at the infrastructure. The research team, or its majority, must work in countries other than the country(ies) where the infrastructure is located (when the infrastructure is composed of several research facilities, operated by different legal entities, this condition must apply to each facility) except when access is provided by an International organisation, the Joint Research Centre (JRC), an ERIC or similar legal entities with international membership. User teams where all or the majority of users work in third countries can be supported as long as

¹⁰⁰ See Article 18 and Annex 5 of Horizon Europe Model Grant Agreement

¹⁰¹ "Installation" means a part or a service of a research infrastructure that can be used independently from the rest. A research infrastructure consists of one or more installations.

the cumulative access provided to them is below 20% of the total amount of units of access provided under the grant. In exceptional and well justified cases a higher percentage of access to third-country user teams can be set out in the proposal.

Only user groups that are allowed to disseminate the results they have generated under the action may be eligible for access (unless the users are working for SMEs).

The duration of stay at a research infrastructure must normally be limited to three months, unless otherwise provided for in the proposal.

The EU financial support to trans-national access will cover the *access costs*¹⁰² incurred by the access provider in providing access to the selected researchers, as well as the travel and subsistence costs incurred in supporting visits to the infrastructure of these researchers.

The *access costs* charged to the grant will not include capital investments (including depreciation costs of equipment, infrastructure or other assets) nor internally invoiced goods and services, unless otherwise specified in the work programme, while they may cover the running costs of the infrastructure as well as the cost for the logistical, technological and scientific support for users' access. This includes costs for ad-hoc training users need to use the infrastructure and for preparatory and closing activities that may be necessary to carry out users' work on the infrastructure.

Virtual access activities

Virtual access provision must be implemented as follows:

Virtual access to research infrastructure is provided through communication networks to users complying with the RI's access policy, without selecting them. Examples of virtual access activities are provision of access to databases available via Internet, or data deposition services.

The research infrastructures must publicise widely the access offered under the grant agreement to ensure that researchers who might wish to have access to the infrastructures are made aware of the possibilities open to them.

The EU financial support to virtual access will cover the *access costs*¹⁰³ incurred by the infrastructure in providing access under the project, including the technological and scientific

¹⁰² Access costs will be supported through the reimbursement of the eligible costs specifically incurred by a research infrastructure for providing access to the research teams selected for support under the project, or on the basis of unit costs calculated according to the methodology indicated in the [Decision](#) of 5 May 2022, authorising the use of unit costs for the costs of providing trans-national and virtual access in Research Infrastructures actions under the Horizon Europe Programme. In the latter case the access costs will be calculated multiplying the unit cost by the quantity of access provided under the grant. The cost of the unit of access to the infrastructure, i.e. the unit cost, must then be indicated in the proposal. A combination of the two methods mentioned above will also be possible.

¹⁰³ Access costs will be supported through the reimbursement of the eligible actual costs specifically incurred by a research infrastructure for providing virtual access to identified users under the project, or on the basis of unit costs calculated according to the methodology indicated in the [Decision](#) of 5 May 2022, authorising the use of unit costs for the costs of providing trans-national and virtual access in Research Infrastructures actions under the Horizon Europe Programme. In the latter case, the access

support researchers need to effectively use the services. Capital investments (including depreciation costs of equipment, infrastructure or other assets) as well as internally invoiced goods and services will not be eligible costs unless otherwise specified under the specific call or topic, in which case only the portion used to provide virtual access under the project can be eligible. A unit of access to each research infrastructure service must be identified and precisely defined in the proposal. The provision of virtual access during the project lifetime will be measured through the units of access defined in the grant agreement and must be periodically assessed by an external board. Eligibility criteria (e.g. affiliation to a research or academic institution) for users can be defined in the proposal, to take into account the access policies of the different RIs.

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costs will be calculated multiplying the unit cost by the quantity of access provided under the grant. The cost of the unit of access to the research infrastructure, i.e. the unit cost, must then be indicated in the proposal. A combination of the two methods mentioned above will also be possible.

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Horizon Europe
Work Programme 2025

4. Health

IMPORTANT NOTICE:

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

This draft is made public before the adoption of the work programme to provide potential participants with the currently expected main lines of this work programme. Only the adopted work programme will have legal value.

The adoption of the work programme will be announced on the Horizon Europe website and on the Funding and Tenders Portal.

Information and topic descriptions indicated in this draft may not appear in the final work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

The Commission expressly disclaims liability for any future changes of the content of this document.

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Introduction

Introduction

This work programme part is the first for the Health Cluster under Horizon Europe's new strategic plan for 2025-2027. It reflects a detailed review of the first four years of Horizon Europe (2021-2024), identifying funding gaps, emerging research needs and future challenges. It aligns with the European Commission's Political Guidelines for 2024-2029, focusing on strengthening healthcare resilience, leveraging biotechnology and artificial intelligence, and addressing public health needs including supporting the development of critical medicines. Research and innovation are key to achieving these goals, especially in healthcare.

As outlined in the Horizon Europe strategic plan, the main priorities of the Health Cluster from 2025 to 2027, are geared towards social cohesion, inclusion, and the overall health and wellbeing of Europeans, in line with the European Pillar of Social Rights. These priorities also emphasise the need to modernise healthcare systems and support an innovative, sustainable, and competitive health industry in Europe.

The EU's substantial pre-COVID-19 investments in infectious disease research enabled a swift response to the pandemic, including the development of vaccines. Building on this experience, the establishment of the European Health Emergency Preparedness and Response Authority (HERA) underscores the Commission's commitment to pandemic preparedness. The Health Cluster will continue to invest in this area, supporting the objectives of the European Health Union.

The public health impacts of climate change, pollution, and biodiversity loss (the triple planetary crisis) are increasingly evident. Research and Innovation investments are essential to understanding and mitigating these effects on human health and healthcare systems. This aligns with EU policies such as the European Green Deal and the EU Climate Adaptation Strategy. Additionally, the surge in mental health issues, exacerbated by the pandemic, climate crisis, and other stressors, highlights the need for further Research and Innovation investments in support of the Commission initiative on a comprehensive approach to mental health.

Further investments are necessary to address Europe's long-term challenges related to an ageing population and non-communicable diseases. The Health Cluster will contribute to initiatives such as “Healthier Together - EU Non-communicable Diseases Initiative” and the Cancer Mission, supporting the policy objectives of Europe’s Beating Cancer Plan.

Europe's healthcare systems, already strained by demographic changes and chronic conditions, face additional pressures from the energy crisis, inflation, and pandemic-related backlogs. The Health Cluster will explore ways to enhance the resilience of these systems, complementing the work of the European Partnership on Transforming Health and Care

Systems. This includes promoting greener practices, addressing health inequities, and leveraging digital transformation.

Further investments are also needed to leverage the innovation potential of health data and data-driven approaches. The proposed European Health Data Space (EHDS) Regulation will provide a framework for data-based health Research and Innovation activities, ensuring compliance with the EU's high data protection standards. Critical technologies such as Artificial Intelligence (AI) and biotechnology will be supported to secure EU technological sovereignty in the healthcare sector, in line with the EU "Artificial Intelligence Strategy" and the EU "Biotechnology and Biomanufacturing Strategy".

The Health Cluster work programme part for 2025 will take the first stride in addressing the needs and challenges identified in the strategic plan for 2025-2027 and support the objectives set by the European Commission's Political Guidelines for 2024-2029. It focuses on key areas such as the health impacts from pollution and environmental degradation, supporting policies like the European Green Deal and the Zero Pollution Action Plan. It will also address non-communicable diseases, mental health, pandemic preparedness, and antimicrobial resistance, which is a critical medicine area. This includes new treatment options, AI-based tools for pandemic response, and the European Partnership for Brain Health, as well as measures to improve the quality of life for individuals with intellectual disabilities. Furthermore, the programme aims to enhance healthcare efficiency, patient engagement, and trust in AI tools, in line with the European care strategy and the digital transformation of health and care in the EU. It will support biotechnology and AI to improve healthcare, including cellular and cell-free therapeutic approaches, generative AI models for biomedical research, and bridging the gap between pre-clinical and clinical development. Additionally, it will advance manufacturing processes for medical devices and Advanced Therapy Medicinal Products, supporting the EU Industrial Policy, ensuring the security of supply and resilience of the single market, fostering industrial competitiveness, and promoting sustainable practices. By aiming to improve regulatory processes and accelerate market access for innovative medicines, this work programme part also aligns with recommendations outlined in the Draghi report.

In March 2024, the Commission adopted the Strategic Technologies for Europe Platform (STEP) to boost investments in critical technologies in Europe: clean and resource efficient technologies, digital and deep innovation technologies and biotechnologies. STEP will mobilise funding from existing EU programmes to support the development and manufacturing of these critical technologies, while safeguarding and strengthening the respective value chains, as well as associated services and skills critical for and specific to the development and manufacturing of the final products. This work programme part identifies one action in support of STEP objectives, for which proposals meeting the minimum requirements indicated in the specific call conditions will receive a STEP seal¹ (See topic HORIZON-HLTH-2025-01-TOOL-05: "Boosting the translation of biotech research into innovative health therapies").

¹ https://strategic-technologies.europa.eu/about/step-seal_en

To realise the potential of new Research and Innovation for society, collaboration between research teams and prospective users of the knowledge and technology developed is paramount. It is therefore essential to involve these users - such as patients, healthy citizens, healthcare professionals, providers and payers, public health authorities, regulators, and innovators from academia and industry - early in the process of knowledge generation and technology development. This involvement can take the form of patient and citizen engagement, community involvement, and other social innovation approaches, ensuring that Research and Innovation activities align with the specific expectations, needs, constraints, and potential of users. Furthermore, effective intellectual property management strategies are crucial to maximise the benefits of such cooperation.

It is in the EU's strategic interest to cooperate with countries beyond the EU, particularly for multilateral cooperation on (global) health issues. This includes countries associated to Horizon Europe as well as other partner countries and regions worldwide. In line with the EU's Global Approach to Research and Innovation², participation in the Health Cluster of Horizon Europe is open to third countries. Supporting the Global Gateway Strategy³, projects involving international partners should aim to increase scientific knowledge and facilitate technology transfer among partner countries, addressing global health challenges and fostering sustainable growth and job creation. Such cooperation should be value-based, creating linkages rather than dependencies.

Applicants are encouraged to explore opportunities for synergies between the Health Cluster and other EU programmes⁴ to enhance the reach and impact of their projects, such as through broader stakeholder cooperation and follow-on activities. Synergies are in particular foreseen between the Health Cluster and the EU4Health programme to facilitate the uptake, further development and deployment of new knowledge and technologies in fields such as cancer, non-communicable diseases, mental health, pandemic preparedness and antimicrobial resistance, health systems and digital health. Synergies are also foreseen between the Health Cluster and the Digital Europe Programme to leverage Horizon Europe Research and Innovation results, such as deploying digital, privacy-preserving (distributed) data infrastructures, high-performance computing resources, and developing methods and tools for modeling complex phenomena related to human health.

The European Regional Development Fund (ERDF) -including Interreg- focuses, amongst others, on the development and strengthening of regional and local Research and Innovation ecosystems and smart economic transformation, in line with regional/national smart specialisation strategies. The programme can e.g., support investment in research infrastructure, activities for applied Research and Innovation, including industrial research,

² COM(2021) 252 final

³ JOIN(2021) 30 final

⁴ E.g., the EU4Health programme, the Digital Europe Programme, European Regional Development Fund (ERDF), including Interreg, European Social Fund (ESF+), Structural Reform Support Programme (SRSP), the Just Transition Fund (JTF), the European Maritime and Fisheries Fund (EMFF), the European Agricultural Fund for Rural Development (EAFRD), the European Defence Fund (EDF) or InvestEU.

experimental development and feasibility studies, building on Research and Innovation stemming from Horizon Europe⁵.

To further strengthen the impact of Research and Innovation efforts, Horizon Europe applicants could consider tapping into complementary activities offered by other relevant initiatives funded under the Horizon Europe programme. These include the innovation ecosystems and service provisions of the Knowledge and Innovation Communities (KICs) of the European Institute of Innovation and Technology (EIT), particularly EIT-KIC Health and EIT-KIC Digital, or the interregional networks funded under the European Innovation Ecosystems (EIE) component of Pillar III.

In addition, applicants to the Health Cluster are encouraged to explore opportunities for complementary topics and activities in other Clusters or parts of the Horizon Europe programme that address thematically similar challenges and areas of intervention. This can be in the Clusters of Pillar II, in the European Research Infrastructures work programme part (Pillar I), or in the European Innovation Council work programme (Pillar III). More specifically, beneficiaries of Horizon Europe grants are invited to consider possible collaborations and cross-fertilisation between their project and other projects selected under the same or other relevant calls.

The EU's Recovery and Resilience Facility (RRF) offers support to Member States in financing reforms and investments that improve their resilience and their growth potential, mitigate the economic and social impacts from the COVID-19 crisis, including in the area of health, and support the twin green and digital transitions. For project ideas that go beyond the remits of a Research and Innovation proposal and directly contribute to the objectives of the RRF it is advisable to check access to funding available at national level in line with the Member States' approved recovery and resilience plans for a fast and targeted support.

For topics in this Cluster, consortia could consider voluntarily contributing data, indicators, and knowledge to relevant Joint Research Centre (JRC) platforms. This would help capitalise on the knowledge developed in their projects and enhance their relevance to policymaking^{6, 7, 8, 9, 10, 11}.

In the context of the Health Cluster work programme part for 2025, FAIR data are data which meet the principles of findability, accessibility, interoperability, and reusability. Data may

⁵ Synergies between Horizon Europe and ERDF (including Interreg): See draft Commission notice https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/synergies-guidance-out-2022-07-06_en

⁶ https://health.ec.europa.eu/system/files/2022-02/eu_cancer_plan_en_0.pdf

⁷ The European Cancer Information System (ECIS - <https://ecis.jrc.ec.europa.eu>) and the European Network of Cancer Registries (ENCR - <https://www.encreu.eu>)

⁸ European Commission Initiatives on Breast and Colorectal Cancer: <https://healthcare-quality.jrc.ec.europa.eu>

⁹ European Cancer Inequalities Registry: <https://cancer-inequalities.jrc.ec.europa.eu>

¹⁰ European Platform on Rare Disease Registration (EU RD Platform - <https://eu-rd-platform.jrc.ec.europa.eu/en>) - for rare cancers

¹¹ Health Promotion and Disease Prevention Knowledge Gateway Horizon Europe: https://knowledge4policy.ec.europa.eu/health-promotion-knowledge-gateway_en

include, amongst others, exploitation of information, digital research data generated in the action, data from European research infrastructures and programmes such as Copernicus, European Space Agency and the GEO initiative. For further details, see the FAIR principles website¹², the FAIR cookbook¹³ and the guides for researchers on how to make your data FAIR¹⁴.

Applicants to calls of the Health Cluster are encouraged to consider, where relevant, the services offered by current and future EU-funded European Research Infrastructures, including those prioritised by the European Strategy Forum on Research Infrastructures (ESFRI)¹⁵, European Research Infrastructure Consortia (ERICs)¹⁶ and the European Open Science Cloud¹⁷. Moreover, if projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, they must make use of European space technologies and services provided by Copernicus and/or Galileo/EGNOS (other data and services may additionally be used)¹⁸.

In the context of the Health Cluster work programme part for 2025, a clinical study covers clinical studies/trials/investigations/cohorts and is defined as any systematic prospective or retrospective collection and analysis of health data obtained from individual patients or healthy persons in order to address scientific questions related to the understanding, prevention, diagnosis, monitoring or treatment of a disease, mental illness, or physical condition. It includes but it is not limited to clinical studies as defined by Regulation 536/2014 (on medicinal products), clinical investigation and clinical evaluation as defined by Regulation 2017/745 (on medical devices), performance study and performance evaluation as defined by Regulation 2017/746 (on in vitro diagnostic medical devices).

Please note that the European Union (EU) pharmaceutical legislation known as the Clinical Trials Regulation No 536/2014¹⁹ entered into application on 31 January 2022, repealing the Clinical Trials Directive (EC) No. 2001/20/EC and national implementing legislation in the EU Member States, which regulated clinical trials in the EU until the Regulation's entry into application. As a result, from 31 January 2023, all initial clinical trial applications in the European Union (EU) must be submitted via the Clinical Trials Information System (CTIS)²⁰. CTIS is now the single-entry point for sponsors and regulators of clinical trials for the submission and assessment of clinical trial data.

¹² <https://www.go-fair.org/fair-principles>

¹³ <https://faircookbook.elixir-europe.org/content/home.html>

¹⁴ <https://www.openaire.eu/how-to-make-your-data-fair>

¹⁵ <https://ri-portfolio.esfri.eu>

¹⁶ <https://www.eric-forum.eu/the-eric-landscape>

¹⁷ https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/open-science/european-open-science-cloud-eosc_en

¹⁸ European space technology based earth observation, positioning, navigation and timing services provided by: Copernicus, the European Union's Earth observation programme <https://www.copernicus.eu/en/copernicus-services>; Galileo, the European Global Satellite Navigation System (GNSS) <https://www.gsc-europa.eu/galileo/services/galileo-initial-services>; and the European Geostationary Navigation Overlay Service (EGNOS) <https://www.euspa.europa.eu/eu-space-programme/egnos>

¹⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014R0536>

²⁰ <https://euclinicaltrials.eu>

The Horizon Europe strategic plan (2025-2027) sets out three Key Strategic Orientations (KSOs) for the last three years of the EU's framework programme for Research and Innovation, namely: KSO 1: "The Green Transition," aiming to support Europe in becoming the world's first climate-neutral continent by 2050, tackling biodiversity loss and pollution; KSO 2: "The Digital Transition," focusing on reinforcing Europe's competitiveness and strategic autonomy through research in core digital technologies; and KSO 3: "A More Resilient, Competitive, Inclusive, and Democratic Europe," aiming to bolster Europe's social rights and democratic values, ensuring they are globally promoted. This includes research in civil security, health and wellbeing, a fair economic model, and democratic participation.

The Health Cluster will support these KSOs by enhancing the understanding of climate change impacts on health, developing tools to protect against global health challenges, and reducing the sector's carbon footprint. It will promote technological and digital advancements to improve healthcare systems, focusing on disease prevention, personalised treatment, and equitable access to health services. Additionally, it will foster inclusive and resilient healthcare systems capable of responding to cross-border health threats and demographic changes, leveraging digital technologies such as AI to accelerate health research and improve health outcomes.

More specifically, the Health Cluster will support the KSOs by contributing to the six expected impacts set out for the Health Cluster in the strategic plan 2025-2027, which translate into the following six destinations of the Health Cluster work programme part for 2025:

Destination "Staying healthy in a rapidly changing society": The expected impact is that people of all ages in the EU stay healthy, resilient, and independent even as society changes fast. This will arise from healthier lifestyles and behaviour, healthier diets, healthier environments, improved evidence-informed health policies, and more effective solutions for health and wellbeing promotion, disease prevention and monitoring, and rehabilitation.

Destination "Living and working in a health-promoting environment": The expected impact is that people's living and working environments are health-promoting and sustainable thanks to a better understanding of the environmental, occupational, social, sex and gender-related, and economic determinants of health.

Destination "Tackling diseases and reducing disease burden": The expected impact is that healthcare providers improve their ability to tackle and manage diseases (infectious diseases, including poverty-related and neglected diseases, non-communicable and rare diseases) thereby reducing the disease burden on patients and enabling healthcare systems to perform more effectively. It can be achieved through better understanding, prevention, diagnostics, treatment, management, and cure of diseases and their co- and multi-morbidities, more effective and innovative health technologies and medical countermeasures, better ability and preparedness to manage pandemic and/or epidemic outbreaks, and improved patient safety.

Destination "Ensuring equal access to innovative, sustainable, and high-quality healthcare": The expected impact is that healthcare systems provide equal access to

innovative, sustainable and high-quality healthcare thanks to the development and uptake of safe, cost-effective and people-centred solutions. This is to be accompanied by management models focusing on population health, health systems resilience, and health equity and patient safety, and also improved evidence-informed health policies.

Destination “Developing and using new tools, technologies and digital solutions for a healthy society”: The expected impact is that health technologies, data, new tools, and digital solutions are applied effectively thanks to their inclusive, ethically sound, secure and sustainable delivery, integration and deployment in health policies and in health and care systems.

Destination “Maintaining an innovative, sustainable, and competitive EU health industry”: The expected impact is that the EU health industry is innovative, sustainable, and globally competitive thanks to improved uptake of breakthrough technologies and innovations (including social innovations) that make the EU with its Member States and Associated Countries more resilient and less reliant on imports of critical health technologies.

Calls

Call - Cluster 1 - Health (Single stage - 2025)

HORIZON-HLTH-2025-01

Overview of this call²¹

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ²²	Indicative number of projects expected to be funded
		2025		
Opening: 22 May 2025 Deadline(s): 16 Sep 2025				
Destination - Tackling diseases and reducing disease burden				
HORIZON-HLTH-2025-01-DISEASE-01: Testing safety and efficacy of phage therapy for the treatment of antibiotic-resistant bacterial infections	RIA	45.00	Around 15.00	3
HORIZON-HLTH-2025-01-DISEASE-03: Development of antibodies and antibody-derived proteins for the prevention and treatment of infectious diseases with epidemic potential	RIA	50.00	Around 10.00	5
HORIZON-HLTH-2025-01-DISEASE-04: Leveraging artificial intelligence for pandemic preparedness and response	RIA	35.00	6.00 to 8.00	5
HORIZON-HLTH-2025-01-DISEASE-05:	CSA	2.00	Around	1

²¹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

²² Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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Support for the functioning of the Global Research Collaboration for Infectious Disease Preparedness (GloPID-R)			2.00	
HORIZON-HLTH-2025-01-DISEASE-06: Implementation research addressing strategies to strengthen health systems for equitable high-quality care and health outcomes in the context of non-communicable diseases (GACD)	RIA	20.00	3.00 to 4.00	5
HORIZON-HLTH-2025-01-DISEASE-07: Tackling high-burden for patients and under-researched medical conditions	RIA	30.00	Around 6.00	5
Destination - Ensuring equal access to innovative, sustainable, and high-quality healthcare				
HORIZON-HLTH-2025-01-CARE-01: End user-driven application of Generative Artificial Intelligence models in healthcare (GenAI4EU)	RIA	40.00	15.00 to 20.00	2
Destination - Developing and using new tools, technologies and digital solutions for a healthy society				
HORIZON-HLTH-2025-01-TOOL-01: Enhancing cell therapies with genomic techniques	RIA	50.00	8.00 to 10.00	5
HORIZON-HLTH-2025-01-TOOL-02: Advancing cell secretome-based therapies	RIA	40.00	9.00 to 13.00	3
HORIZON-HLTH-2025-01-TOOL-03: Leveraging multimodal data to advance Generative Artificial Intelligence applicability in biomedical research (GenAI4EU)	RIA	50.00	15.00 to 17.00	3
HORIZON-HLTH-2025-01-TOOL-05: Boosting the translation of biotech research into innovative health therapies	RIA	80.00	4.00 to 8.00	10
Destination - Maintaining an innovative, sustainable, and competitive EU health industry				
HORIZON-HLTH-2025-01-IND-01: Optimising the manufacturing of Advanced Therapy Medicinal Products (ATMPs)	IA	40.00	6.00 to 8.00	5
HORIZON-HLTH-2025-01-IND-02: Digitalisation of conformity assessment procedures of medical devices and in vitro	CSA	4.00	Around 4.00	1

diagnostic medical devices				
Overall indicative budget		486.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Partnerships in Health (2025)

HORIZON-HLTH-2025-02

Overview of this call²³

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)			Expected EU contribution per project	Indicative number of projects
		2025	2026	2027		

²³ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

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					(EUR million) ²⁴	expected to be funded
Opening: 13 May 2025 Deadline(s): 03 Jun 2025						
Destination - Tackling diseases and reducing disease burden						
HORIZON-HLTH-2025-02-DISEASE-01: European Partnership for Brain Health	COFUND	56.50	46.50	47.00	Around 150.00	1
HORIZON-HLTH-2025-02-DISEASE-02: European partnership fostering a European Research Area (ERA) for health research (Phase 2)	COFUND	77.00			Around 77.00	1
Overall indicative budget		133.50	46.50	47.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

²⁴ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Call - Cluster 1 - Health (Two stage - 2025)

HORIZON-HLTH-2025-03-two-stage

Overview of this call²⁵

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ²⁶	Indicative number of projects expected to be funded
		2025		
Opening: 22 May 2025				
Deadline(s): 16 Sep 2025 (First Stage), 16 Apr 2026 (Second Stage)				
Destination - Staying healthy in a rapidly changing society				
HORIZON-HLTH-2025-03-STAYHLTH-01-two-stage: Improving the quality of life of persons with intellectual disabilities and their families	RIA	40.00	6.00 to 8.00	5
Destination - Living and working in a health-promoting environment				
HORIZON-HLTH-2025-03-ENVHLTH-01-two-stage: The impact of pollution on the development and progression of brain diseases and disorders	RIA	40.00	6.00 to 7.00	6
HORIZON-HLTH-2025-03-ENVHLTH-02-two-stage: Advancing knowledge on the impacts of micro- and nanoplastics on human health	RIA	40.00	7.00 to 8.00	5
Destination - Tackling diseases and reducing disease burden				

²⁵ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

²⁶ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Horizon Europe - Work Programme 2025
Health

HORIZON-HLTH-2025-03-DISEASE-02-two-stage: Advancing innovative interventions for mental, behavioural and neurodevelopmental disorders	RIA	50.00	6.00 to 8.00	7
Destination - Maintaining an innovative, sustainable, and competitive EU health industry				
HORIZON-HLTH-2025-03-IND-03-two-stage: Facilitating the conduct of multinational clinical studies of orphan devices and/or of highly innovative (“breakthrough”) devices	RIA	40.00	6.00 to 8.00	5
Overall indicative budget		210.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Destinations

Destination - Staying healthy in a rapidly changing society

Topics under this destination are directed towards the Key Strategic Orientation 2 “*The Digital transition*” and Key Strategic Orientation “*A more resilient, competitive, inclusive, and democratic Europe*” of Horizon Europe’s strategic plan 2025-2027.

Research and Innovation supported under this destination should contribute to the following expected impact, set out in the strategic plan impact summary for the Health Cluster: “*people of all ages in the EU stay healthy, resilient, and independent even as society changes fast. This will arise from healthier lifestyles and behaviour, healthier diets, healthier environments, improved evidence-informed health policies, and more effective solutions for health and well-being promotion, disease prevention and monitoring, and rehabilitation*”.

People’s healthcare needs are different, depending on their age, stage of life, health status and socioeconomic background. Both physical and mental health are shaped not only by personal circumstances but also by the broader societal environment. In 2019, nearly 650,000 premature deaths across the EU²⁷ could have been prevented with effective primary prevention and public health measures targeting modifiable risk factors such as smoking, alcohol use and lack of physical activity. In addition, an estimated 135 million people in Europe live with a disability²⁸, highlighting the critical need for healthcare systems that are both accessible and adaptable. With population ageing and the rising prevalence of chronic conditions due to noncommunicable diseases and injuries, this number is set to increase in the future. Upbringing, income, education levels, social and gender aspects, and minority background play a critical role in shaping health risks as well as in prevention and management of disease. To leave no one behind, reduce health inequalities and support healthy and active lives for all, it is crucial to provide suitable, tailor-made solutions, including for people with specific needs. The prevention and early detection of diseases along with support and empowerment of citizens regarding their own health and wellbeing are at the core of successful public health programmes in the future.

Research and Innovation under this destination should help enhance the dialogue and coordination among stakeholders and policymakers, ensuring integration across different care settings to develop effective cross-sectoral solutions for holistic health promotion and disease prevention. Funded activities should seek to leverage the wealth of data sources, including real-world health data, to develop integrated and personalised health promotion and disease prevention strategies. These activities will benefit from emerging data resources such as the European Health Data Space (EHDS)²⁹ and European Open Science Cloud (EOSC)³⁰, and

²⁷ https://health.ec.europa.eu/document/download/3f9d55be-9e36-43d9-99ad-b96ac63a5b9b_en?filename=2022_healthatglance_rep_en_0.pdf

²⁸ <https://www.who.int/europe/news-room/fact-sheets/item/disability> The WHO European Region comprises 53 countries, covering a vast geographical region from the Atlantic to the Pacific oceans.

²⁹ https://health.ec.europa.eu/ehealth-digital-health-and-care/european-health-data-space_en

contribute to the European care strategy³¹ and the digital transformation of health and care in the EU³². During the first four years of Horizon Europe (2021-2024), this destination focused on urgent health issues such as obesity prevention, digital health literacy, understanding health-to-disease transitions, and using Artificial Intelligence (AI) to predict chronic disease risks. It also emphasised holistic disease prevention, healthy ageing, life course approaches to physical and mental health from early childhood, and personalised disease prevention.

In this work programme part, the emphasis will be on enhancing the quality of life, autonomy, and empowerment of individuals with intellectual disabilities and their families through innovative medical, technological, and digital solutions. This includes comprehensive and personalised approaches to health promotion, disease prevention, and integrated care. Importantly, this focus addresses habilitation and rehabilitation for disabilities, which have not yet been funded under the Horizon Europe Health Cluster. This aligns with the EU Strategy for the Rights of Persons with Disabilities 2021-2030 and supports Pillar 17 of the European Pillar of Social Rights, which aims to promote the inclusion of people with disabilities.

To increase the impact of EU investments under Horizon Europe, the European Commission encourages collaboration between EU-funded projects to foster synergies through networking, joint workshops, knowledge exchange, best practices, and joint communication activities. Synergies can be explored between projects funded under the same or different topics, Clusters or pillars of Horizon Europe. This includes collaborations between projects funded under Cluster 1 and Cluster 2 for complementary actions, such as promoting social inclusion, health equity (including gender equality and support for marginalised groups), and mental health initiatives in education, work, and daily life (including through culture and the arts).

Expected impacts:

Proposals for topics under this destination should set out a credible pathway to contributing to staying healthy in a rapidly changing society, and more specifically to one or several of the following impacts:

- Citizens adopt healthier lifestyles and behaviours, make healthier choices and maintain longer a healthy, independent and active life with a reduced disease burden, including at old ages or in other vulnerable stages of life.
- Citizens are empowered to effectively manage their physical and mental health and wellbeing, monitor their health status, and interact with healthcare providers to optimise their wellbeing throughout life.

³⁰ https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/open-science/european-open-science-cloud-eosc_en

³¹ Communication from the European Commission on the European care strategy, COM(2022) 440, 7.9.2022

³² Communication from the European Commission on enabling the digital transformation of health and care in the Digital Single Market; empowering citizens and building a healthier society, COM(2018) 233, 25.4.2018

- Children and adolescents are empowered to better monitor and manage their physical, social and mental health with a view to lifelong healthy lifestyles.
- Society benefits from reduced economic and health burdens due to preventable illness and premature mortality, efficiency is increased by targeting scarce resources in appropriate, cost-effective ways, to areas of high social return, contributing to an improvement and optimisation of health and wellbeing of citizens and reduction of health inequalities.
- Citizens' trust in knowledge-based health interventions and in guidance from health authorities is strengthened, including through improved health literacy, resulting in increased engagement in and adherence to effective strategies for health promotion, disease prevention and treatment, while digital literacy inequalities are minimised.
- Health policies and actions for health promotion and disease prevention are knowledge-based, people-centred, personalised and thus targeted and tailored to citizens' needs, and designed to reduce health inequalities.

Proposals are invited against the following topic(s):

HORIZON-HLTH-2025-03-STAYHLTH-01-two-stage: Improving the quality of life of persons with intellectual disabilities and their families

Call: Cluster 1 - Health (Two stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health's programmes to European researchers, any legal entity established in the</p>

	<p>United States of America is eligible to receive Union funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>For the first stage, the thresholds for each criterion will be 4 (Excellence) and 4 (Impact). The overall threshold applying to the sum of the two individual scores will be set at a level that ensures the total requested budget of proposals admitted to stage 2 is as close as possible to four times the available budget, and not less than three and a half times the available budget.</p> <p>For the second stage, the thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ³³.</p>

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Staying healthy in a rapidly changing society”. To that end, proposals under this topic should aim to deliver results that are directed at, tailored towards and contributing to several of the following expected outcomes:

- Persons with intellectual disabilities and their families enjoy an improved quality of life, are empowered and have more independence through the support of innovative research.

³³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- The scientific community develops innovative solutions - medical, technological, digital or others - to reverse and/or reduce the severity level of the intellectual disability as soon as possible, especially in children, improving the health and autonomy of persons with intellectual disabilities and relieving their carers.
- Policymakers, health and care services, patient organisations, funders, the scientific community, and other relevant bodies are informed of the research advances and best practices addressing the health and needs of persons with intellectual disabilities and help reduce the impact of those disabilities on individuals, their families and society.

Scope: The scope of this topic is set by the definitions provided by ‘*The international classification of diseases*’ - World Health Organization (WHO) ICD11 under ‘6A00: Disorders of intellectual development’³⁴ and under ‘20: Developmental anomalies’³⁵ including disorders of intellectual development, such as ‘LD40: Complete trisomies of the autosomes’³⁶ and ‘LD90: Conditions with disorders of intellectual development as a relevant clinical feature’³⁷. Moreover, the three types of autism with disorders of intellectual development (6A02.1, 6A02.3 and 6A02.5) under ‘6A02: Autism spectrum disorder’³⁸ are also within the scope of this topic.

The focus of this topic is human-centred on the persons with long-term intellectual disabilities³⁹ and their formal and informal carers, including families. The life expectancy of persons with intellectual disabilities has increased in the last 20 years, which makes it even more important to analyse the role of their families acting as informal carers (e.g. ageing parents).

The objective of this topic is to explore new ways to improve the quality of life of persons with intellectual disabilities and their families and to reduce to the maximum possible the negative impact of the disability in their daily lives from different perspectives, such as medical, technological, digital or others. A key element to improve their quality of life is to prevent the worsening of the disability or conditions originating it. Thus, research needs to look from different perspectives into finding the causes of the disease(s) originating the disability and/or reducing as much as possible its level of severity.

³⁴ Disorders of intellectual development are a group of etiologically diverse conditions originating during the developmental period characterised by significantly below average intellectual functioning and adaptive behaviour that are approximately two or more standard deviations below the mean (approximately less than the 2.3rd percentile), based on appropriately normed, individually administered standardised tests. Where appropriately normed and standardised tests are not available, diagnosis of disorders of intellectual development requires greater reliance on clinical judgment based on appropriate assessment of comparable behavioural indicators. See also

³⁵ <https://icd.who.int/browse/2024-01/mms/en#605267007>

³⁶ <https://icd.who.int/browse/2024-01/mms/en#223744320>

³⁷ <https://icd.who.int/browse/2024-01/mms/en#948835301>

³⁸ <https://icd.who.int/browse/2024-01/mms/en#775270311>

³⁹ <https://icd.who.int/browse/2024-01/mms/en#437815624>

Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others (Art. 1 of the Convention on the Rights of Persons with Disabilities - <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities>).

Innovative solutions are needed to provide novel medicines, diagnoses, treatments, protocols, technologies or digital solutions, etc. that can help in an early stage to prevent the worsening of the intellectual disability and/or related co-morbidities, reverse or reduce it, and to improve the autonomy of affected persons and relieve their carers.

Research actions under this topic should address several of the following areas:

- To properly diagnose as early as possible the disease(s) causing the intellectual disability or conditions worsening them, especially in the case of children, and paying attention to sex and gender-related differences and diagnostic biases.
- Deliver the necessary medical treatments, diagnoses, medicines, protocols, technologies, digital solutions, habilitation and/or rehabilitation services, etc. that can help preventing the worsening of the intellectual disability, reversing it or reducing its severity, while supporting the empowerment of the person with intellectual disabilities. Any health technology or medical intervention developed for human use must comply with the relevant regulatory requirements and be based on sound scientific evidence to ensure safety and efficacy.
- Tackle comorbidities or other disabilities that persons with intellectual disabilities may suffer from, with awareness of sex and gender-related differences.
- Provide evidence-based approaches for transitional care for young adults with intellectual disabilities, addressing also sex and gender-specific challenges and needs, the transition from paediatric to adult care being perceived as complex to navigate.
- Promote the empowerment among persons with intellectual disabilities and their caregivers, and whenever possible remove barriers persons with intellectual disabilities face for their participation in society. If applicable, with the support of assistive technologies and digital solutions, ensure optimal autonomy of persons with intellectual disabilities, facilitate and improve the treatment of persons with intellectual disabilities, and help also the family members and close carers to better support persons with intellectual disabilities. Such technologies must adhere to the relevant standards and be grounded in scientific evidence.
- Propose innovative solutions for high quality, accessible - including cognitively accessible - and affordable care services, to allow carers of persons with intellectual disabilities to better balance their work and family lives. The role of informal/unpaid carers, especially family members, is of key importance for persons with intellectual disabilities. For many persons with intellectual disabilities, the lack of care services and insufficient support for families and personal assistance undermines their quality of life and their rights and possibility to live as independently as possible.
- Develop innovative integrated care strategies - strengthening patient-centred care - to improve the Quality of Life of persons with intellectual disabilities of any age, and their families, paying special attention to persons with intellectual disabilities with the highest

vulnerability because of their high dependency on carers (formal and/or informal), multiple disabilities and need of adapted and special care (medical, social, educational and psychological dimensions).

- Develop guidelines in order to provide adequate support and training for caregivers, formal and informal, especially for those providing care for persons with intellectual disabilities and/or living with them, and also addressing the issue of prevention of and protection from violence since persons with intellectual disabilities are both vulnerable to violence and abuse and can be violent towards care givers and family members.

Applicants are encouraged to include patients, their families and carers in the different stages of the research. Likewise, it is encouraged to involve stakeholders from within and outside the intellectual disabilities sector, in particular policymakers and public authorities, citizens and civil society organisations, end-users and service providers.

This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

All projects funded under this topic are encouraged to participate in networking and joint activities, as appropriate. These networking and joint activities could, for example, involve the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. Therefore, proposals are expected to include a budget for the attendance to regular joint meetings and may consider covering the costs of any other potential joint activities without the prerequisite to detail concrete joint activities at this stage. The details of these joint activities will be defined during the grant agreement preparation phase.

Projects are also encouraged to explore potential complementarities with projects funded under the Cluster 2 topic HORIZON-CL2-2025-01-TRANSFO-09: “Good practices for increased autonomy of persons with disabilities, including physical, mental, intellectual and sensory disabilities” are encouraged.

Applicants invited to the second stage and envisaging to include clinical studies⁴⁰ should provide details of their clinical studies in the dedicated annex using the template provided in the submission system.

⁴⁰ Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

Destination - Living and working in a health-promoting environment

Topics under this destination are directed towards the Key Strategic Orientation 1 “*The Green transition*” and Key Strategic Orientation 3 “*A more resilient, competitive, inclusive, and democratic Europe*” of Horizon Europe’s strategic plan 2025-2027.

Research and innovation supported under this destination should contribute to the following expected impact, set out in the strategic plan impact summary for the Health Cluster: “*people's living and working environments are health-promoting and sustainable thanks to a better understanding of the environmental, occupational, social, sex and gender-related, and economic determinants of health*”.

The environment we live and work in is a major determinant of our health and wellbeing. The World Health Organization estimates that approximately 12.6 million deaths each year (24% of global deaths) are attributable to environmental risk factors and these factors are estimated to account for almost 20% of all deaths in Europe. Pollution in particular leads to more than 10% of annual premature deaths around the world. Environment-related disease burden also has significant economic effects. The environmental factors impacting on both physical and mental health and wellbeing are not well identified nor their effects comprehensively understood and accounted for to support evidence-based policy- and decision-making. Therefore, this destination aims at filling knowledge gaps in the understanding of the impacts on our health and wellbeing of those environmental, occupational and socio-economic risk factors that have the most significant or widespread societal impacts.

In this work programme part, Destination “*Living and working in a health-promoting environment*” focuses on the health impacts of exposures to pollution and environmental degradation in living and working environments. The results will support the EU’s environment and health policies and overarching policy frameworks such as the European Green Deal, the Chemical Strategy for Sustainability, the Zero Pollution Action Plan, the 8th Environment Action Programme, the EU Strategic Framework on Health and Safety at Work as well as the WHO European Environment and Health Process (EHP). Strong collaborations across sectors and with other Horizon Europe Clusters dealing with issues such as agriculture, food, environment, climate, biodiversity, mobility, security, urban planning, social inclusion and gender will be needed to ensure that maximal societal benefits are reached. In view of increasing the impact of EU investments under Horizon Europe, the European Commission welcomes and supports cooperation between EU-funded projects to enable cross-fertilisation and create synergies. This could range from networking to joint activities such as the participation in joint workshops, the exchange of knowledge, development and adoption of best practices, or joint communication activities. All topics are open to international collaboration to address global environment and health challenges.

Expected impacts:

Proposals for topics under this destination should set out a credible pathway to contributing to living and working in a health-promoting environment, and more specifically to one or several of the following impacts:

- Policy-makers and regulators are aware and well informed about environmental, socio-economic and occupational risk factors as well as health-promoting factors across society;
- Environmental, occupational, social, economic, and health policies and practices at the EU, national and regional level are sustainable and based on solid scientific evidence.
- The upstream determinants of health are known, understood and reduced;
- The health threats and burden resulting from hazardous chemicals and air, water and soil pollution and contamination are lessened, so that the related number of deaths and illnesses is substantially reduced;
- Living and working environments in European cities and regions are healthier, more inclusive, safer, resilient and sustainable;
- The adaptive capacity and resilience of populations and health systems in the EU to climate and environmental change-related to mental and physical health risks are strengthened;
- Citizens' health and wellbeing are protected and promoted, and premature deaths, diseases and inequalities related to environmental pollution and degradation are prevented;
- Citizens understand better complex environment and health issues, and effective measures to address them and support related policies and regulations.

Proposals are invited against the following topic(s):

HORIZON-HLTH-2025-03-ENVHLTH-01-two-stage: The impact of pollution on the development and progression of brain diseases and disorders

Call: Cluster 1 - Health (Two stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply: Applicants submitting a proposal under the blind evaluation pilot (see

	<p>General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health's programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>ECHA ⁴¹ or other relevant decentralised EU agency (such as the European Environment Agency - EEA ⁴²) involved in the future Common Data Platform for Chemicals, may participate as member of the consortium selected for funding. Applicants may include in their proposals the possible contribution of the decentralised EU agency(ies) but the decentralised EU agency(ies) will not participate in the preparation and submission of the proposal. Applicants will indicate the contribution that the decentralised EU agency(ies) could bring to the project based on the scope of the topic text. After the evaluation process, the decentralised EU agency(ies) and the consortium selected for funding may come to an agreement on the specific terms of the participation of the decentralised EU agency(ies). If an agreement is found, the decentralised EU agency(ies) may participate in the grant agreement without any funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>For the first stage, the thresholds for each criterion will be 4 (Excellence) and 4 (Impact). The overall threshold applying to the sum of the two individual scores will be set at a level that ensures the total requested budget of proposals admitted to stage 2 is as close as possible to four times the available budget, and not less than three and a half times the available budget.</p> <p>For the second stage, the thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative</p>

⁴¹ European Chemicals Agency

⁴² European Environment Agency

	threshold will be 12.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁴³.</p> <p>In order to maximise synergies and increase the impact of the projects, all proposals selected for funding from this topic will form a cluster and be required to participate in common networking and joint activities (and in determining modalities for their implementation and the specific responsibilities of projects). These activities will be included in a dedicated work package, having sufficient budget allocated to it (around 2% of the total requested budget). Depending on the scope of proposals selected for funding, these activities may include:</p> <ul style="list-style-type: none">• Attendance of regular joint meetings (e.g., common kick-off meeting and annual meetings).• Periodic report of joint activities (delivered at each reporting period).• Common dissemination and communication activities (which may include, for example: a common dissemination and communication strategy, web portal and visual identity, brochure, newsletters).• Common Data Management Strategy and Common Policy Strategy (including joint policy briefs).• Thematic workshops/trainings on issues of common interest.• Working groups on topics of common interest (e.g. data management and exchange, communication and dissemination,

⁴³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

	science-policy link, scientific synergies).
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Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Living and working in a health-promoting environment”. To that end, proposals under this topic should aim to deliver results that are directed, tailored and contributing to most of the following expected outcomes:

- Global and EU policies preventing and reducing the health impacts of pollution are supported with up-to-date scientific evidence, tools and methodologies;
- Citizens are more protected by having a better insight into exposure to pollution and its impacts on brain health and adopting health enhancing behaviours;
- Public authorities, health stakeholders, the scientific community and the society at large have access to FAIR⁴⁴ data on the link between pollution and brain health, particular windows of susceptibility to exposure and the impacts of pollution on the general population and vulnerable groups;
- Public authorities develop adequate evidence-based measures and guidelines to prevent and reduce the negative impacts of pollution in the development of brain disease.

Scope: Life-long exposure to pollutants in the living and occupational environment is an important risk factor for non-communicable diseases, leading to a variety of serious physical and mental health impacts and causing preventable disease burden with associated elevated economic costs. Pollution disproportionately impacts certain vulnerable groups (e.g. children and older adults) or groups who are more sensitive or more exposed (workers, populations living in polluted areas) to this type of environmental stressor. At present, over 10% of annual premature deaths in the 27 EU Member States are related to environmental pollution⁴⁵.

Age is a major risk factor for neurodegenerative diseases, but environmental exposure and lifestyle are important candidates for understanding their aetiology. Accumulating evidence suggests that the “exposome”, described as the totality of human environmental exposures from pre-conception onwards, represents a major modifiable risk factor for most neurodegenerative diseases and dementia. Additionally, emerging evidence suggests that pollution, may contribute to the development of neurodegenerative disease, with increasing incidence in an ageing population.

The environment is known to be a significant determinant of child health, with increasing evidence that some industrial chemicals are toxic to the development of the human brain. The health impact of many potentially neurotoxic chemicals remains unstudied in human populations, including in children. The developing brain is particularly vulnerable to toxic chemical exposures and this sensitivity is likely greatest in utero and throughout early childhood.

⁴⁴ See definition of FAIR data in the introduction to this work programme part.

⁴⁵ <https://www.eea.europa.eu/en/topics/at-a-glance/state-of-europes-environment>

Chronic and repeated exposure to pollutants, in working environments but also for consumers, has also been associated with increased risk of cognitive impairment and neurodegeneration.

Research activities under this topic should explore evidence on the causal link between exposure to different pollutants (focusing on specific pollutants or a combination thereof) and the development or progression of neurological, neurodegenerative or neurodevelopmental diseases or disorders⁴⁶. Proposals can consider occupational, living and/or social environments and include one or more vulnerable, sensitive or exposed population groups. More specifically research actions under this topic should include several of the following activities while focusing either on neurological, neurodegenerative or neurodevelopmental diseases or disorders⁴⁷:

- Gain better insights on the pathogenesis and the molecular, genetic and epigenetic pathways and biological mechanisms involved in the onset and progression of disease, considering emerging pollutants, specific windows of susceptibility and adopting, when relevant, a life-course approach. Synergistic neurotoxic effects and realistic doses and duration of exposure should also be considered;
- Generate evidence on the impacts of pollution in comorbidities associated to neurodegenerative, neurological or neurodevelopmental diseases and disorders;
- Develop and/or validate better in-vivo, in-silico and in-vitro models, instruments and/or methods and take advantage (as applicable) of structural, functional and molecular imaging methods (e.g. MRI nuclear imaging), multi-omics and bioinformatics to study disease causation and evolution, considering, among others, also epigenetic factors and providing better biomarkers for early detection and disease progression;
- Apply the exposome framework to advance the understanding of the role of environment on neurodegenerative diseases research; elucidating the neuroexposome and emphasizing the brain's distinctive responses to environmental exposures;
- Contribute to the development of health indicators to inform mitigation and prevention measures, incorporating, when relevant, an intersectional approach that considers diverse individual characteristics such as sex, gender, age, ethnicity, and disability and socioeconomic and lifestyle factors;
- Strengthen the understanding of the possible causative link between exposure and incidence of disease by taking advantage of well-designed longitudinal studies (considering exposure duration and differences in exposure composition, geographical location and sources), rigorously controlled epidemiologic studies and/or clinical, real-

⁴⁶ For guidance on the diseases and disorders under scope of this topic please consult ICD-11 for Mortality and Morbidity Statistics (who.int): <https://icd.who.int/browse/2024-01/mms/en#1516623224> Chapters 6 and 8 specifically on neurodevelopmental disorders and neurocognitive disorders (including accelerated cognitive decline and chronic pain conditions).

⁴⁷ For each of the three focus areas, proposals can address one or several diseases or disorders as relevant for the research action proposed.

world and/or cohort data (building on existing national and international cohorts when available);

- Generate evidence on the potential association between the accumulated long-term exposure of workers and consumers to pollutants (including low-level exposure) and neurological and neurodegenerative diseases. The development of neurodevelopmental disorders in children following parental exposure could also be evaluated.

Gender and sex-related differences should be addressed, where appropriate.

Applicants are encouraged to consider the use of experimental methods not using live animals, where relevant and allowing to obtain data of comparable validity.

Proposals should adhere to the FAIR⁴⁸ data principles and adopt wherever relevant, data standards and data sharing/access good practices.

The effect of nutrition on mental health should not be the main focus since this area will be covered by topic HORIZON-CL6-2025-02-FARM2FORK-12: “Nutrition and Mental Health”.

Applicants should be acquainted with the activities being developed under the Environment, climate and health research portfolio⁴⁹, the EFSA activities under Environmental Neurotoxics⁵⁰ and Developmental neurotoxicity⁵¹ and the Partnership for the Assessment of Risks from Chemicals - PARC⁵².

This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals should take advantage of and connect to European research infrastructures and services in the area of environmental exposure assessment.

Proposals should ensure that chemical monitoring including human biomonitoring data are shared in the Information Platform for Chemical Monitoring (IPCHEM)⁵³ through involvement with the European Commission's Joint Research Centre (JRC), and/or in the future Common Data Platform for Chemicals, through involvement with the European Chemicals Agency (ECHA)⁵⁴ or other relevant decentralised EU agency (such as the European Environment Agency - EEA⁵⁵) responsible for the specific domain. In that respect, the JRC, ECHA or other relevant decentralised EU agency(ies) should collaborate with any

⁴⁸ See definition of FAIR data in the introduction to this work programme part.

⁴⁹ https://research-and-innovation.ec.europa.eu/research-area/health/environment-and-health_en

⁵⁰ <https://etendering.ted.europa.eu/cft/cft-display.html?cftId=13967>

⁵¹ <https://www.efsa.europa.eu/en/art36grants/article36/gpefsaed202201-nam-projects-areas-aop-development-and-transcriptomics-risk>

⁵² <https://www.eu-parc.eu>

⁵³ <https://ipchem.jrc.ec.europa.eu>

⁵⁴ <https://echa.europa.eu>

⁵⁵ <https://www.eea.europa.eu>

successful proposal and this collaboration, when relevant, should be established after the proposal's approval.

In order to maximise synergies and increase the impact of the projects, all proposals selected for funding from this topic will form a cluster and be required to participate in common networking and joint activities. Without the prerequisite to detail concrete joint activities, proposals should allocate a sufficient budget for the attendance of regular joint meetings and to cover the costs of any other potential common networking and joint activities. Guidance on the potential activities to be developed can be obtained by consulting the clusters of projects ongoing under the Environment, climate and health research portfolio⁵⁶.

Applicants invited to the second stage should provide details of their clinical studies⁵⁷ in the dedicated annex using the template provided in the submission system. As proposals under this topic are expected to include clinical studies, the use of the template is strongly encouraged.

HORIZON-HLTH-2025-03-ENVHLTH-02-two-stage: Advancing knowledge on the impacts of micro- and nanoplastics on human health

Call: Cluster 1 - Health (Two stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 7.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health's programmes to European researchers, any legal entity established in the</p>

⁵⁶ https://research-and-innovation.ec.europa.eu/research-area/health/environment-and-health_en

⁵⁷ Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

	<p>United States of America is eligible to receive Union funding.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>ECHA ⁵⁸ or other relevant decentralised EU agency (such as the European Environment Agency - EEA ⁵⁹) involved in the future Common Data Platform for Chemicals, may participate as member of the consortium selected for funding. Applicants may include in their proposals the possible contribution of the decentralised EU agency(ies) but the decentralised EU agency(ies) will not participate in the preparation and submission of the proposal. Applicants will indicate the contribution that the decentralised EU agency(ies) could bring to the project based on the scope of the topic text. After the evaluation process, the decentralised EU agency(ies) and the consortium selected for funding may come to an agreement on the specific terms of the participation of the decentralised EU agency(ies). If an agreement is found, the decentralised EU agency(ies) may participate in the grant agreement without any funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>For the first stage, the thresholds for each criterion will be 4 (Excellence) and 4 (Impact). The overall threshold applying to the sum of the two individual scores will be set at a level that ensures the total requested budget of proposals admitted to stage 2 is as close as possible to four times the available budget, and not less than three and a half times the available budget.</p> <p>For the second stage, the thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>
<i>Legal and financial set-up of</i>	<p>The rules are described in General Annex G. The following exceptions</p>

⁵⁸ European Chemicals Agency

⁵⁹ European Environment Agency

<i>the Grant Agreements</i>	<p>apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁶⁰.</p> <p>In order to maximise synergies and increase the impact of the projects, all proposals selected for funding from this topic will form a cluster and be required to participate in common networking and joint activities (and in determining modalities for their implementation and the specific responsibilities of projects). These activities will be included in a dedicated work package, having sufficient budget allocated to it (around 2% of the total requested budget). Depending on the scope of proposals selected for funding, these activities may include:</p> <ul style="list-style-type: none">• Attendance of regular joint meetings (e.g., common kick-off meeting and annual meetings).• Periodic report of joint activities (delivered at each reporting period).• Common dissemination and communication activities (which may include, for example: a common dissemination and communication strategy, web portal and visual identity, brochure, newsletters).• Common Data Management Strategy and Common Policy Strategy (including joint policy briefs).• Thematic workshops/trainings on issues of common interest.• Working groups on topics of common interest (e.g. data management and exchange, communication and dissemination, science-policy link, scientific synergies).
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Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Living and working in a health-promoting environment”. To that end, proposals under this topic should aim to deliver results that are directed, tailored and contributing to most of the following expected outcomes:

⁶⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Environmental and health policies reducing exposure to micro- and nanoplastics and preventing their potential health impacts are supported with up-to-date scientific evidence, standards, tools and methodologies;
- Public authorities and the scientific community have access to FAIR⁶¹ data on realistic human exposures to micro- and nanoplastics and their potential impacts on human health based on real-world scenarios across living and working environments;
- Citizens are informed about the impacts of exposure to micro- and nanoplastics on health and adopt behaviours protecting health and reducing human impacts on the environment;
- Industry is supported in the assessment of products' safety and sustainability;
- Existing major knowledge gaps in the understanding of the health impacts of exposure to micro- and nanoplastics are filled and mitigation measures based on robust evidence are promoted;
- Public authorities and regulators are supported with evidence-based guidance to design health policies.

Scope: Plastics are an important material in our economy that are everywhere in our daily lives but can present negative environmental and health impacts. A significant amount of plastic ends up in the environment, degrading into micro- or nano-sized plastic particles that are defined as micro- or nanoplastics (MNPs). MNPs can be detected in both marine and terrestrial ecosystems worldwide in food, water, air and consumer products. These MNPs have been documented to accumulate in the human body into cells and tissues (e.g. liver, kidney, gastrointestinal track, placenta, testicles) and cause associated adverse biological effects (e.g. inflammatory response, geno-, cyto-, neuro- and nephron-, respiratory and reproductive toxicity). Exposure routes for MNPs into the human body can be through inhalation, ingestion and dermal contact and translocation of nanoplastics and small microplastics through tissues and organs can occur. Furthermore, it has been documented that MNPs can cause additional harm by releasing specific chemical additives with potentially negative health impacts. However, because microplastics are an emerging contaminant and research on the causality between exposure to MNPs and health impacts is still at a relatively early stage, the evidence on the health risks of exposure to MNPs is scattered and numerous knowledge gaps still persist.

Research activities under this topic should strengthen the evidence on the impacts of micro- and nanoplastics exposure on human health, considering living and working environments and different exposure routes (inhalation, ingestion and dermal exposure). Proposals should focus on realistic concentrations of tested particles and exposures to a variety of sizes, shapes and chemical compositions of MNPs materials and advance in the comparability between studies. Moreover, research activities should take into account recent policy developments,

⁶¹ See definition of FAIR data in the introduction to this work programme part.

support relevant policy gaps and needs and support the work on standardisation of analytical methods.

More specifically, research actions under this topic should include several of the following activities:

- Increase comparability and reproducibility between studies by means of a better optimisation, validation and standardisation of the analytical methods, protocols and methodologies to collect MNPs in the environment and detect and quantify the exposure in the human body and in the environment;
- Study the causal mechanisms of action and pathways involved on molecular, cellular and organism level effects from exposure to MNPs;
- Improve the understanding of the drivers of toxicity and other adverse health effects of MNPs, using realistic environmental samples and considering varying sizes, shapes, concentrations and chemical compositions, and interaction with components in the environment;
- Develop suitable and (environmentally) relevant reference materials that can be used to improve robustness and comparability across laboratories;
- Develop better in-vivo, in-silico and in-vitro models, instruments and methods for risk and hazard assessment harmonised across various types of MNPs. These include long-term exposure and monitoring models, mimicking real-world scenarios and dosimetry and observational studies on humans and development of strategies to integrate experimental and in-silico data;
- Strengthen the existing knowledge on human exposure to micro- and nanoplastics through the development of human biomonitoring studies and the use of specific biomarkers and endpoints;
- Generate evidence on the long-term impacts of MNPs on human health, MNPs' fate and systemic effects through well-designed and robust systematic studies;
- Provide robust evidence on the exposures to MNPs at work: identify environments with highest concentrations and focus on improving approaches for assessment, prevention and mitigation of occupational exposures;
- Increase the understanding of the environmental routes of exposure to MNPs, considering real-life exposure routes;
- Propose mitigation measures to reduce population exposure to MNPs including collecting evidence on the health impacts of potential alternative materials developed to replace plastics;

- Gain better insights on the interactions between MNPs (and their additives) with other pollutants and/or biological agents and the combined impacts of these interactions on human health (considering also the understanding of individual toxicity effects);
- Gain better insights on the delivery mechanisms and study the elimination process of MNPs in the human body and the microbiome capacity to degrade (or accelerate degradation of) ingested MNPs;
- Promote exchange of knowledge and experiences across MS and policies and engage with regulators and public authorities to ensure suitability and further uptake of relevant results.

Gender and sex related differences should be addressed, where appropriate.

Applicants are encouraged to consider the use of experimental methods not using live animals, where relevant and allowing to obtain data of comparable validity.

This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities. Proposals should adhere to the FAIR⁶² data principles and adopt wherever relevant, data standards and data sharing/access good practices.

Proposals could consider the involvement of the European Commission's Joint Research Centre (JRC) with respect to the value it could bring in providing an effective interface between research activities and regulatory aspects and/or in translating research results into harmonised test methods and strategies fit for regulatory purpose. In that respect, the JRC will consider collaborating with any successful proposal and this collaboration, when relevant, should be established after the proposal's approval.

Proposals should also ensure that chemical monitoring including human biomonitoring data are shared in the Information Platform for Chemical Monitoring (IPCHEM)⁶³ through involvement with the European Commission's Joint Research Centre (JRC), and/or in the future Common Data Platform for Chemicals, through involvement with the European Chemicals Agency (ECHA)⁶⁴ or other relevant decentralised EU agency (such as the European Environment Agency - EEA⁶⁵) responsible for the specific domain. In that respect, the JRC, ECHA or other relevant decentralised EU agency(ies) should collaborate with any successful proposal and this collaboration, when relevant, should be established after the proposal's approval.

In order to maximise synergies and increase the impact of the projects, all proposals selected for funding from this topic will form a cluster and be required to participate in common networking and joint activities. Without the prerequisite to detail concrete joint activities,

⁶² See definition of FAIR data in the introduction to this work programme part.

⁶³ <https://ipchem.jrc.ec.europa.eu>

⁶⁴ <https://echa.europa.eu>

⁶⁵ <https://www.eea.europa.eu>

proposals should allocate a sufficient budget for the attendance of regular joint meetings and to cover the costs of any other potential common networking and joint activities. Guidance on the potential activities to be developed can be obtained by consulting the clusters of projects ongoing under the Environment, climate and health portfolio⁶⁶.

Applicants invited to the second stage should provide details of their clinical studies⁶⁷ in the dedicated annex using the template provided in the submission system. As proposals under this topic are expected to include clinical studies, the use of the template is strongly encouraged.

⁶⁶ https://research-and-innovation.ec.europa.eu/research-area/health/environment-and-health_en

⁶⁷ Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

Destination - Tackling diseases and reducing disease burden

Topics under this destination are directed towards the Key Strategic Orientation 3 “*A more resilient, competitive, inclusive, and democratic Europe*” of Horizon Europe’s strategic plan 2025-2027.

Research and Innovation supported under this destination should contribute to the following expected impact, set out in the strategic plan impact summary for the Health Cluster: “*healthcare providers improve their ability to tackle and manage diseases (infectious diseases, including poverty-related and neglected diseases, non-communicable and rare diseases) thereby reducing the disease burden on patients and enabling healthcare systems to perform more effectively. It can be achieved through better understanding, prevention, diagnostics, treatment, management, and cure of diseases and their co- and multi-morbidities, more effective and innovative health technologies and medical countermeasures, better ability and preparedness to manage pandemic and/or epidemic outbreaks, and improved patient safety*”.

Communicable and non-communicable diseases cause the greatest amounts of premature death and disabilities and pose a major health, societal and economic threat and burden in the EU and worldwide. Many people are still suffering from these diseases and too often dying prematurely. Although many of these diseases are preventable to a large extent, only around 6% of the healthcare budgets are currently spent on preventive measures⁶⁸. Therefore, there is the urgent need to develop new public health interventions, preventive, diagnostic and therapeutic approaches, alternatives to antimicrobials, as well as to improve existing preparedness and response strategies to create tangible impacts, taking into account sex/gender-related issues. In this regard, Research and Innovation will require international cooperation to pool the best expertise and know-how available worldwide, to access world-class research infrastructures and to leverage critical scales of investments on priority needs through a better alignment with other funders of international cooperation in health Research and Innovation. The continuation of international partnerships and cooperation with international organisations is particularly needed to combat infectious diseases, to address brain health, to respond to public health needs, including the global burden of non-communicable diseases.

In this work programme part, Destination “*Tackling diseases and reducing disease burden*” will focus on major societal challenges linked to the Commission’s political priorities such as the fight against non-communicable and communicable diseases, mental health and better treatment of mental, behavioural and neurodevelopmental diseases, preparedness and response to and surveillance of health threats and epidemics, reduction and treatment of the number of antimicrobial-resistant infections. In particular, the topics under this destination will support activities aiming at: i) new effective treatment options for patients suffering from

⁶⁸ Preventive healthcare expenditure as a share of the current expenditure on healthcare [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Preventive healthcare expenditure as a share of current expenditure on healthcare, 2021 \(%25\) HCE2024.png](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Preventive_healthcare_expenditure_as_a_share_of_current_expenditure_on_healthcare,_2021_(%25)_HCE2024.png)

antimicrobial resistant (AMR) infections; ii) innovative therapeutic interventions and complementary approaches for patients suffering from mental, behavioural and neurodevelopmental disorders; iii) new prevention and treatment options for infectious diseases with epidemic potential; iv) Artificial Intelligence (AI) based tools and technologies for pandemic preparedness and response; v) implementation research on strengthening health systems in the context of non-communicable diseases; vi) supporting the Global Research Collaboration for Infectious Disease Preparedness; vii) setting up the European Partnership for Brain Health; and viii) supporting efforts of the European Partnership fostering a European Research Area for health research (ERA4Health)⁶⁹ in particular in funding large-scale multi-country Investigator-Initiated Clinical Studies (IICS) on various health interventions addressing important public health needs.

In view of increasing the impact of EU investments under Horizon Europe, the European Commission welcomes and supports cooperation between EU-funded projects to enable cross-fertilisation and other synergies. This could range from networking to joint activities such as the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. Opportunities for potential synergies exist between projects funded under the same topic but also between other projects funded under another topic, Cluster or pillar of Horizon Europe (but also with ongoing projects funded under Horizon 2020). In particular, this could involve projects related to European health research infrastructures (under pillar I of Horizon Europe), the EIC strategic challenges on health and EIT-KIC Health (under pillar III of Horizon Europe), or in areas cutting across the health and other Clusters (under pillar II of Horizon Europe). For instance, with Cluster 3 “*Civil security for society*” such as on health security/emergencies (preparedness and response, medical countermeasures, epidemic outbreaks/pandemics, natural disasters and technological incidents, bioterrorism); with Cluster 4 “*Digital, Industry and Space*” such as on AI-based tools and technologies (e.g. detection, management and monitoring of an epidemic at population levels, and the diagnosis, treatment, and prevention at the level of individuals); or with Cluster 6 “*Food, bioeconomy, natural resources, agriculture and environment*” such as on antimicrobial resistance - AMR (e.g. new effective treatment options, alternatives to antibiotics).

Some Research and Innovation actions under this destination should support the mission of the European Health Emergency and Response Authority (HERA) to strengthen Europe’s ability to prevent, detect, and rapidly respond to cross-border health emergencies by ensuring the availability and access to key medical countermeasures. Furthermore, synergies will be sought between this destination and the implementation of the EU4Health Programme (2021-2027)⁷⁰. These synergies and complementarities could be achieved, notably through mechanisms based on feedback loops, enabling on the one hand to identify policy needs that should be prioritised in Research and Innovation actions and facilitating on the other hand the

⁶⁹ <https://era4health.eu>

⁷⁰ https://health.ec.europa.eu/funding/eu4health-programme-2021-2027-vision-healthier-european-union_en

implementation of research results into policy actions and clinical practice, thereby providing an integrated response across sectors and policy fields.

Expected impacts:

Proposals for topics under this destination should set out a credible pathway to contributing to tackling diseases and reducing disease burden, and more specifically to several of the following impacts:

- Disease burden in the EU and worldwide is reduced through effective disease management, including through the development and integration of innovative preventive, diagnostic and therapeutic approaches, digital and other people-centred solutions for healthcare.
- Premature mortality from non-communicable diseases is reduced by one third (by 2030), mental health and wellbeing are promoted, and the voluntary targets of the WHO Global Action Plan for the Prevention and Control of NCDs⁷¹ 2013-2020 are attained (by 2025), with an immediate impact on the related disease burden (Disability-Adjusted Life Years - DALYs)^{72,73,74}.
- Healthcare systems benefit from strengthened Research and Innovation expertise, human capacities and know-how for combatting communicable and non-communicable diseases, including through international cooperation.
- Citizens benefit from reduced (cross-border) health threat of epidemics and AMR pathogens, in the EU and worldwide^{75,76}.
- Patients and citizens are knowledgeable of disease threats, involved and empowered to make and shape decisions for their health, and better adhere to knowledge-based disease management strategies and policies (especially for controlling outbreaks and emergencies).

The protection of European communication networks has been identified as an important security interest of the Union and its Member States. Entities that are assessed as high-risk suppliers⁷⁷ of mobile network communication equipment (and any entities they own or

⁷¹ Non-communicable diseases

⁷² <https://www.who.int/publications/i/item/9789241506236>

⁷³ Including for instance the following voluntary targets (against the 2010 baseline): A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases; Halt the rise in diabetes and obesity; An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major non-communicable diseases in both public and private facilities.

⁷⁴ Disability-adjusted life year (DALY) is a quantitative indicator of overall disease burden, expressed as the number of years lost due to ill-health, disability or early death.

⁷⁵ WHO global action plan on antimicrobial resistance, 2015

⁷⁶ EU One Health Action Plan against AMR, 2017

⁷⁷ Entities assessed as “high-risk suppliers”, are currently set out in the second report on Member States’ progress in implementing the EU toolbox on 5G cybersecurity of 2023 (NIS Cooperation Group, Second report on Member States’ progress in implementing the EU Toolbox on 5G Cybersecurity, June 2023) and the related Communication on the implementation of the 5G cybersecurity toolbox of 2023

control) are not eligible to participate as beneficiaries, affiliated entities and associated partners to topics identified as “subject to restrictions for the protection of European communication networks”. Please refer to the Annex B of the General Annexes of this Work Programme for further details.

Proposals are invited against the following topic(s):

HORIZON-HLTH-2025-01-DISEASE-01: Testing safety and efficacy of phage therapy for the treatment of antibiotic-resistant bacterial infections

Call: Cluster 1 - Health (Single stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 15.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 45.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health’s programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>
<i>Legal and financial set-up of the Grant</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the</p>

(Communication from the Commission: Implementation of the 5G cybersecurity Toolbox, Brussels, 15.6.2023 C(2023) 4049 final).

<i>Agreements</i>	Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁷⁸ .
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Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Tackling diseases and reducing disease burden”. To that end, proposals under this topic should aim to deliver results that are directed, tailored towards and contributing to most of the following expected outcomes:

- Researchers and developers make the best use of the state-of-the-art knowledge and resources for an effective development of new treatment options for patients suffering from difficult-to-treat infections.
- Healthcare professionals and people living with difficult-to-treat infections are ultimately provided with the availability of clinically useful phage therapies.
- Regulators are provided with quantifiable, verifiable and replicable data on safety and efficacy of phage therapy for human use and move faster towards market approval of novel phage-based therapies against antimicrobial resistant infections.
- Citizens are engaged and informed on innovative phage-based treatments as alternative therapeutic options complementary to antibiotics.

Scope: Antimicrobial resistance (AMR) has been identified by the United Nations (UN) General Assembly as a health Emergency in 2016. AMR is contributing to morbidity and mortality increasing the burden for society and healthcare costs. This is due to a worrying increase on the number of bacteria resistant to antibiotic treatment, causing chronic and often life-threatening infections such as wound and urinary tract infections. The World Health Organization (WHO) lists AMR among the top 10 threats for global health⁷⁹ and recognises that a lack of innovation is set to undermine antibiotic performance and health gains, with a major gap in the discovery of innovative antibacterial treatments⁸⁰.

Hence, there is an urgent need for the development of therapies to treat infections.

Bacteriophages (phages) represent a promising alternative or complement to antibiotics for the treatment of infections that do not respond to conventional treatment options. With the increase of AMR bacteria, both healthcare practitioners and innovators are expressing an increasing interest in the use of phages for the treatment of infections. As a result, the clinical

⁷⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁷⁹ <https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance>

⁸⁰ <https://www.who.int/news/item/22-06-2022-lack-of-innovation-set-to-undermine-antibiotic-performance-and-health-gains>

use of phage therapy is expanding in the EU and beyond under different regulatory pathways, approaches and different conditions (e.g. magistral personalised phage preparations and fixed phage cocktails applied via compassionate use, named-patients based or expanded access programmes) despite a lack of large data on the efficacy of phage therapy for human use. So far, a few modest-sized randomised-controlled trials have been conducted providing indications for the safety and efficacy of the phage products, in agreement with preclinical animal studies. However, they could not always prove the efficacy of phage preparations.

Therefore, proposals should aim to develop phage-based therapies to treat bacterial infections that do not respond to conventional treatment options. For this, applicants should carry out multicenter, multinational randomised controlled clinical trial (RCT) to generate scientific evidence demonstrating safety and efficacy of phage-based therapy as stand-alone or in combination with standard-of-care (such as antibiotic or other innovative non-antibiotic-based treatment) for the treatment of difficult-to-treat bacterial infections.

Both approaches for phage therapy, personalised phage preparations or ready-to-use phage cocktails, are in scope with the call. Innovative study design, aiming at better capturing and evaluating the full potential of the benefit of personalised phage therapy, e.g. using regularly updated phage preparations, is welcome.

The topic is open to any pathogen causing difficult to treat infections mainly due to AMR or to biofilms, for any clinical indication and applying phage treatment in any route of administration. Applicants are encouraged to address pathogens listed in the WHO Bacterial Priority Pathogens List⁸¹.

Lessons learned from previous clinical trials that failed⁸² (e.g. PhagoBurn) should be considered for optimal study design, e.g. inclusions and logistics criteria, to favour success and conclusive results. The proposed trial should be designed with proper patient selection, diagnostic protocols (e.g. phagogram), production protocols (purification, stability, host selection, etc.) and treatment protocols (including dosage, repetition, duration, route of administration).

All available information about the characteristics of the phages to be used in the clinical trial should be provided (e.g. sequence, stability, targeted bacteria, registration in a phage bank or phage registry, etc.). Moreover, any additional indication of the use of phages for other applications than human use in the clinical trial (e.g. veterinary use, surface cleaning, food preservation) should be detailed in the proposal if available.

The use of computational modelling and/or artificial intelligence (AI) tools is encouraged to speed/optimize trial design, implementation and/or the analysis of large data. In the same way, the use of innovative *in silico*, *in vitro* or *in vivo* models to facilitate pre-clinical selection of phages to use in the clinical trial is welcome.

⁸¹ <https://iris.who.int/bitstream/handle/10665/376776/9789240093461-eng.pdf?sequence=1>

⁸² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9598614>

In their proposal applicants should describe how they take into account scientific advice or protocol assistance from the European Medicines Agency (EMA)⁸³. In addition, applicants should provide a sound timeline on the trial protocol in their proposal. Furthermore, in their proposal applicants should also provide a delivery date for approval of the RCT protocol from the regulatory body(ies), which should be within 12 months from the start of the project.

Applicants should propose a clear exploitation pathway through the different necessary steps (research, manufacturing, regulatory approvals and licensing, Intellectual Property management, etc.) in order to accelerate marketing authorisation and uptake by the health systems.

The participation of start-ups, micro, small and medium-sized enterprises (SMEs)⁸⁴ is encouraged with the aim of strengthening their scientific and technological foundations, enhancing their innovation potential, and exploring possibilities for commercial exploitation.

Proposals should adhere to the FAIR⁸⁵ data principles, adopt wherever relevant, data standards and data sharing/access good practices, and apply good practices for GDPR⁸⁶ compliant personal data protection.

Sex and gender-related differences should be addressed, where relevant. To ensure that the needs of patients living with chronic infections are adequately addressed and that there is public acceptability and confidence on innovative phage-based therapies, the involvement of patient and/or civil society representatives in all phases of the research and development process is strongly encouraged. For this, the topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Applicants should provide details of their clinical studies⁸⁷ in the dedicated annex using the template provided in the submission system. As proposals under this topic are expected to include clinical studies, the use of the template is strongly encouraged.

HORIZON-HLTH-2025-03-DISEASE-02-two-stage: Advancing innovative interventions for mental, behavioural and neurodevelopmental disorders

Call: Cluster 1 - Health (Two stage - 2025)	
Specific conditions	
<i>Expected EU</i>	The Commission estimates that an EU contribution of between EUR

⁸³ <https://www.ema.europa.eu/en/human-regulatory-overview/research-development/scientific-advice-protocol-assistance>

⁸⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003H0361>

⁸⁵ See definition of FAIR data in the introduction to this work programme part.

⁸⁶ General Data Protection Regulation: https://commission.europa.eu/law/law-topic/data-protection_en

⁸⁷ Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

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<i>contribution per project</i>	6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 50.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health's programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>For the first stage, the thresholds for each criterion will be 4 (Excellence) and 4 (Impact). The overall threshold applying to the sum of the two individual scores will be set at a level that ensures the total requested budget of proposals admitted to stage 2 is as close as possible to four times the available budget, and not less than three and a half times the available budget.</p> <p>For the second stage, the thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>

<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁸⁸.</p>
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Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Tackling diseases and reducing disease burden”. To that end, proposals under this topic should aim to deliver results that are directed, tailored towards and contributing to all the following expected outcomes:

- The scientific and clinical communities make effective use of state-of-the-art knowledge, data, technologies, tools, methods, best practices, and trainings to underpin and complement the development of innovative interventions⁸⁹ aimed at achieving a lasting benefit.
- The scientific and clinical communities benefit from the exchange of data, knowledge and best practices, thereby strengthening their collaboration in the EU, the Associated Countries and beyond.
- The scientific and clinical communities make wide use of relevant databases and/or integrate them with existing infrastructures for storage and sharing of collected data according to FAIR⁹⁰ principles, thereby encouraging further use of the data.
- Policymakers, funders, scientific and clinical communities, patient organisations, regulators, and other relevant bodies are informed of the research advances made and the requirements for a widespread implementation of the innovative therapeutic interventions and complementary approaches.
- Patients and caregivers are constructively engaged with the research, ensuring that their needs are catered for, with the aim of tangibly benefitting from the interventions.

Scope: Mental, behavioural and neurodevelopmental disorders, that include for example severe depression, anxiety, schizophrenia, psychosis, post-traumatic stress disorder (PTSD), addictive behaviours (drugs⁹¹, alcohol, gaming and others), obsessive-compulsive disorder,

⁸⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁸⁹ Innovative interventions should be based on new and/or alternative approaches that are aimed at achieving a lasting therapeutic benefit. The innovative intervention should be a combination of a product based on an active substance that is complemented by another multidisciplinary approach.

⁹⁰ See definition of FAIR data in the introduction to this work programme part.

⁹¹ If proposals concern drug addiction, they are encouraged to liaise with the EU Drugs Agency.

eating disorders and autism spectrum disorder are a high burden for patients, health systems and society, and remain unmet medical needs. More innovative, safer and more effective therapeutic and relapse-preventing solutions based on active substances are required, as for example for mental disorders many available treatments show modest efficacy, non-negligible side effects, discontinuation problems and high relapse rates. Additionally, other non-invasive multidisciplinary and/or transdiagnostic approaches (e.g. neurostimulation, neuroimaging, digital, non-pharmaceutical, psychotherapy, psychosocial) should be further developed to complement the therapeutic and relapse prevention solutions. These approaches aim to further improve health outcomes, self-determination, autonomy and quality of life in the long-term.

The disorders within the scope of this topic fall under Chapter 6 of the International Classification of Diseases⁹². Rare diseases are excluded⁹³.

Proposals should address most of the following aspects:

- Perform rigorous clinical studies into the safety and efficacy of the innovative interventions and their mode of administration, ensuring adequate cohorts/sample sizes with adequate representation of the patient population, including in terms of age, sex and ethnicity.
- Through the clinical studies, gain further insight into the mechanism(s) of action of the innovative therapies and complementary approaches. This could entail analyses of imaging (e.g. MRI, ultrasound, nuclear imaging), as well as physiological, molecular, biochemical or omics signatures revealing potential perturbations prior to the intervention and recovery thereafter, and it could lead to the development of surrogate endpoints. This insight should open the path to more personalised interventions and approaches.
- Use and/or develop technologies, including digital ones (e.g., (generative) Artificial Intelligence - AI⁹⁴, wearable technologies) to help implement and monitor the long-term efficacy of the intervention(s), as well as manage the disorder and/or monitor their progression (e.g. with unobtrusive technologies suitable for patient monitoring at home and in real-world conditions), whilst also ensuring they are bias-free, inclusive, and ethically sound.
- Exploit existing data, biobanks, registries and/or cohorts, together with the generation of new data that should be managed in line with the FAIR principles.

⁹² International Classification of Diseases 11th Revision (ICD-11), developed by the World Health Organization (WHO); Chapter 6: 'Mental, behavioural or neurodevelopmental disorders'.

⁹³ Rare diseases, as defined by the European Union Regulation on Orphan Medicinal Products (1999), being a disease that affects not more than 1 person per 2000 in the European population (<https://www.orpha.net/>).

⁹⁴ Generative AI is a type of AI technology that can generate various forms of new content such as text, images, sounds, and even code, such as for programming or gene sequencing (<https://ec.europa.eu/newsroom/dae/redirection/document/101621>).

- Engage all relevant stakeholders (especially patients and patients' representatives for the disorder, caregivers, clinicians, counsellors, regulators, etc.) to design end-user optimised interventions, applying gender-sensitive and intersectional approaches.
- Advance research by leveraging already existing and emerging state-of-the-art research infrastructures (e.g. ECRIN⁹⁵, EATRIS⁹⁶, EBRAINS⁹⁷, BBMRI⁹⁸, EuroBioImaging⁹⁹, European Genomic Data Infrastructure¹⁰⁰, etc.), as well as results stemming from EU-supported research projects, where applicable.
- Engage with national public health authorities and regulators to ensure a robust development pathway and further uptake of the intervention.

The participation of start-ups, micro, small and medium-sized enterprises (SMEs)¹⁰¹ is encouraged with the aim of strengthening their scientific and technological foundations, enhancing their innovation potential, and exploring possibilities for commercial exploitation.

Funded projects should liaise with the European Partnership for Brain Health (covered by topic HORIZON-HLTH-2025-02-DISEASE-01) once launched.

The topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

All projects funded under this topic are strongly encouraged to participate in networking and joint activities, as appropriate. Therefore, proposals should include a budget for the attendance to regular joint meetings and may consider covering the costs of any other potential joint activities without the prerequisite to detail concrete joint activities at this stage. The details of these joint activities will be defined during the grant agreement preparation phase.

Applicants invited to the second stage should provide details of their clinical studies¹⁰² in the dedicated annex using the template provided in the submission system. As proposals under this topic are expected to include clinical studies, the use of the template is strongly encouraged.

⁹⁵ <https://ecrin.org>

⁹⁶ <https://eatris.eu>

⁹⁷ <https://www.ebrains.eu>

⁹⁸ <https://www.bbmri-eric.eu>

⁹⁹ <https://www.eurobioimaging.eu>

¹⁰⁰ <https://gdi.onemilliongenomes.eu>

¹⁰¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003H0361>

¹⁰² Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

HORIZON-HLTH-2025-01-DISEASE-03: Development of antibodies and antibody-derived proteins for the prevention and treatment of infectious diseases with epidemic potential

Call: Cluster 1 - Health (Single stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 50.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health's programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹⁰³.</p>

¹⁰³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Tackling diseases and reducing disease burden”. To that end, proposals under this topic should aim to deliver results that are directed, tailored towards and contributing to all the following expected outcomes:

- The scientific and clinical communities have a better understanding of prophylactic and treatment options complementary to low molecular weight antiviral therapeutics for viruses with epidemic potential.
- The scientific and clinical communities have access to experimental antibodies and antibody-derived proteins for the prevention and treatment of emerging or re-emerging viral infections, as well as for further clinical investigation.
- Candidate antiviral therapies, including potentially those of broad spectrum are available for emerging and re-emerging viral infections, increasing therapeutic options for clinical deployment in case of an epidemic or pandemic.

Scope: As shown by the COVID-19 pandemic, infectious diseases remain a major threat to health and health security in the EU and globally. Viral disease emergence is expected to accelerate due to among other, climate change, and thus a proactive approach to the development of antiviral prophylactics and therapeutics in preparedness for future infectious disease outbreaks is needed. The availability of antibodies and antibody-derived proteins would provide a critical preparedness measure against future health threats, due to infectious disease epidemics or pandemics.

Proposals should exclusively pursue the development of existing antiviral and prophylactic and therapeutic candidates that are based on antibody and/or antibody-derived proteins targeting at least one of the priority viruses:

- Arenaviridae: Junin mammarenavirus, Lassa mammarenavirus
- Hantaviridae: Hantaan virus, Andes virus, Sin Nombre virus
- Poxviridae: Variola major
- Paramyxo: Hendra, Nipah virus
- Togaviridae: Venezuelan equine encephalitis virus

Proposals are expected to conduct preclinical studies of antibodies and antibody-derived proteins, prepare Good Manufacturing Practice (GMP)¹⁰⁴ quality test batches and carry out first in human clinical safety studies. Proposals should include a critical discussion of to what extent the antibodies and antibody-derived proteins would be expected to be amenable to production and distribution at an affordable cost and at a scale sufficient to meet demand in a pandemic.

¹⁰⁴

<https://www.who.int/teams/health-product-policy-and-standards/standards-and-specifications/gmp>

Proposals should thus aim to diversify and accelerate the global prophylactic and therapeutic research and development portfolio for emerging and re-emerging viral infections, and to strengthen the leading role of the EU in prophylactic and therapeutic research and development.

Proposals may focus either on antibody or on antibody-derived proteins, or both.

Proposals should address all the following areas:

- If necessary, finalisation of the in vitro characterisation of the existing antibody and antibody-derived protein candidates with regard to target specificity, epitope recognised, and their ability to impair or inactivate viral functions.
- In vivo tests in at least one animal model or, if available in humanised immune system animal models, to demonstrate the protective function of the antibodies and antibody-derived therapeutics deemed sufficient for moving to first clinical trials.
- If requested by regulators as enablers for clinical studies, in vivo tests in a non-human primate model.
- Production of GMP quality test batches of the most promising candidates for antibodies and antibody-derived proteins in the EU or the European Economic Area.
- First in human clinical safety studies of the antibody and antibody-derived proteins, demonstrating a clear regulatory pathway for market authorisation. Attention should be paid to critical biological and social factors such as sex, age, ethnicity and disability.

Participation of third countries where viruses addressed in the proposal are endemic or where outbreaks have occurred or are ongoing is encouraged.

The participation of start-ups, micro, small and medium-sized enterprises (SMEs)¹⁰⁵ is encouraged with the aim of strengthening their scientific and technological foundations, enhancing their innovation potential, and exploring possibilities for commercial exploitation.

Applicants are expected to engage with regulatory bodies in a timely manner to ensure adequacy of the actions from a regulatory point of view.

Proposals should advance research by leveraging already existing and emerging state-of-the-art research infrastructures such as those having contributed to the services developed under the ISIDORE project¹⁰⁶.

Applicants should provide details of their clinical studies¹⁰⁷ in the dedicated annex using the template provided in the submission system. As proposals under this topic are expected to include clinical studies, the use of the template is strongly encouraged.

¹⁰⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003H0361>
¹⁰⁶ <https://isidore-project.eu>

HORIZON-HLTH-2025-01-DISEASE-04: Leveraging artificial intelligence for pandemic preparedness and response

Call: Cluster 1 - Health (Single stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 35.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health's programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination "Tackling diseases and reducing disease burden". To that end, proposals under this topic should aim to deliver results that are directed, tailored towards and contributing to all the following expected outcomes:

- The potential of Artificial Intelligence (AI) is used in all aspects that determine optimal pandemic preparedness and response, and fast learning systems are supported, to the benefit of scientists, public health responders and policymakers. This includes using the full potential of available quality data for research and innovation to transform the development of medical, social or logistical countermeasures, as well as the detection,

¹⁰⁷ Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

management and monitoring of emergencies at population levels, and the diagnosis, treatment, and prevention at the level of individuals.

- European pandemic preparedness and response benefits from readily available, trustworthy and ethical AI-based tools and technologies that enable it to act fast and in a targeted manner, to timely detect and understand emerging infectious threats, to respond adequately and proportionally to identified threats, and to control such threats effectively and efficiently.
- Different data types from multiple sources and disciplines across the EU and globally can be accessed, integrated and analysed by scientists, public health responders and policymakers, using trustworthy and ethical AI-based tools and technologies that support pandemic preparedness and response.

Scope: The COVID-19 pandemic underscored the need of finding innovative approaches to pandemic preparedness and response, including digital solutions leveraging AI technologies. AI is a fast-developing field, holding an enormous potential in using the multitude of data from an equally vast range of sources, which should be used for improving preparedness and response to epidemics or pandemics in the EU and Associated Countries.

Examples from the COVID-19 pandemic response illustrate how advanced AI tools can enable efficient data use to support areas like forecasting, infectious disease surveillance and monitoring, development of medical interventions, timely diagnosis of infection, disease prognosis, or real-time monitoring of adherence to public health recommendations. New technologies with potentially high impact like air or wastewater real-time monitoring systems have also emerged.

These experiences and advances hold great potential for the future, but additional development and expansion of novel AI-based tools and technologies (including generative AI) is needed, while also further improving and testing existing ones. The use of AI on diverse datasets, as well as on their combinations within and across disciplines, can greatly increase the accuracy of assessments and predictions of medical (pharmaceutical or non-pharmaceutical) interventions in preparedness for, and response to epidemics and pandemics.

Research actions under this topic should include several of the following activities:

- Develop new, or improve existing AI-based tools, methods and technologies, geared towards greater safety, efficiency and impact of medical, societal or logistical countermeasures aiming at the prevention, containment or control of infectious disease epidemics or improved response management of health systems.
- Scout, assemble and prepare appropriate FAIR¹⁰⁸ datasets generated across the EU and Associated Countries (e.g. COVID-19, Influenza, etc.), for the development, training and testing of targeted AI-supported generative assessment and prediction tools, in support of evidence-based policy and decision making for pandemic preparedness and response; in

¹⁰⁸ See definition of FAIR data in the introduction to this work programme part.

areas like surveillance and monitoring of infectious disease and disease dynamics, facilitating differential diagnosis, triage and risk group predictions, predicting drug response and disease progression, etc.

- Leverage the capacities of the existing and emerging data research infrastructures and the future European Health Data Space (EHDS)¹⁰⁹ and the European Open Science Cloud (EOSC)¹¹⁰ architectures and research environments, while comprehensively addressing cybersecurity, data privacy, trustworthiness, equity and data quality, interoperability and access modalities.
- Identify and address the current technical, operational, and social limitations related to the (cross-border) access to quality data and to the smooth implementation of AI-driven solutions in the societal and legal context of the EU and Associated Countries.
- Engage with end-users, policymakers, regulatory bodies and authorities, and other stakeholders in the development, improvement, testing and validation of trustworthy and ethical AI-based tools and technologies, to propose options for the validation and uptake of the novel AI tools in real-world settings taking into consideration aspects like training needs, responsible use, users' trust, energy consumption, etc.

The participation of start-ups, micro, small and medium-sized enterprises (SMEs)¹¹¹ is encouraged with the aim of strengthening their scientific and technological foundations, enhancing their innovation potential, and exploring possibilities for commercial exploitation.

Proposals selected for funding under this topic are expected to participate in joint activities as appropriate, which can take the form of project clustering, workshops, joint dissemination activities, etc. Applicants should anticipate budget to cover this collaboration.

This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Particular attention should be paid to detecting and mitigating gender, ethnicity and other biases, aiming to develop AI models that are fair, trustworthy, and beneficial for all. Proposals are encouraged to explore potential synergies with the projects funded under the topic HORIZON-CL4-2021-HUMAN-01-24: “Tackling gender, race and other biases in AI (RIA)”, as well as under the topic SC1-PHE-CORONAVIRUS-2020-2C: “Behavioural, social and economic impacts of the outbreak response”.

Applicants envisaging to include clinical studies¹¹² should provide details of their clinical studies in the dedicated annex using the template provided in the submission system.

¹⁰⁹ https://health.ec.europa.eu/ehealth-digital-health-and-care/european-health-data-space_en

¹¹⁰ https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/open-science/european-open-science-cloud-eosc_en

¹¹¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003H0361>

HORIZON-HLTH-2025-01-DISEASE-05: Support for the functioning of the Global Research Collaboration for Infectious Disease Preparedness (GloPID-R)

Call: Cluster 1 - Health (Single stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health's programmes to European researchers, legal entities established in the United States of America may exceptionally participate as a beneficiary or affiliated entity, and are eligible to receive Union funding.</p> <p>Coordinators of projects must be legal entities established in an EU Member State or Associated Country.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the</p>

¹¹² Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

	Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹¹³ .
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Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Tackling diseases and reducing disease burden”. To that end, proposals under this topic should aim to deliver results that are directed, tailored towards and contributing to some of the following expected outcomes:

- International research funders are supported by a dynamic and efficient secretariat in their coordination efforts for a rapid research response when a pandemic or a severe epidemic strikes.
- International research funders can rely on a tested framework underpinning a rapid and effective research response, and as such ensure stronger research preparedness and response for public health emergencies, including in cross-cutting areas such as data sharing, social science, clinical trial networks and others.
- Research funders, policymakers and the research community are well informed of the activities of the members of the Global Research Collaboration for Infectious Disease Preparedness (GloPID-R)¹¹⁴, both as a group and individually.

Scope: Recent history has illustrated the potential extent of threats posed by new or emerging infectious diseases, as well as the central importance of global collaboration and coordination to fight such regional or international challenges. GloPID-R was established in 2013 for this reason, in response to a request for coordination by the Heads of International Research Organisations. GloPID-R now provides a widely recognised platform for infectious disease research funders to work together to better tackle severe epidemics such as Ebola or Zika, pandemics at regional level that affect outermost regions, as well as global pandemics such as COVID-19.

GloPID-R enables coordination between funders and with relevant global actors such as the World Health Organization (WHO) or the Coalition for Epidemic Preparedness Innovation (CEPI); or promotes exchanges and synergies between funded researchers. The GloPID-R’s regional hubs strategy fosters regional research priorities and funder engagement. The network is engaged among others in efforts to strengthen the coordination of clinical trial responses, to track research and evidence on diseases with pandemic potential, or to coordinate funding for cross-cutting research on pandemic preparedness.

Proposals should foresee administrative and technical support through a secretariat to maintain, but above all to support GloPID-R’s continuous evolution for an optimal value added.

¹¹³ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹¹⁴ <https://www.glopid-r.org>

Proposals are expected to cover all the following activities:

- Provide administrative and organisational support to the Board of GloPID-R, in close collaboration with the European Commission;
- Provide strong scientific support through a transparent process on topics requested by the GloPID-R Board, independent scientific advisors or (working) groups;
- Facilitate the work of the GloPID-R working groups and scientific advisors, using earlier experience in research preparedness and response to infectious disease outbreaks;
- Manage fluid information dissemination and communication between the Board, Members, scientific advisors, working groups, enquiries, and outside stakeholders;
- Ensure strong external communications activities, e.g. through the website, newsletter, and social media;
- Submit an annual work plan to the Commission each year following the annual meeting of GloPID-R, taking into account the conclusions of the annual meeting;
- Ensure a high level of adaptability to respond to rapidly evolving situations, following the guidance of the GloPID-R Board.

HORIZON-HLTH-2025-01-DISEASE-06: Implementation research addressing strategies to strengthen health systems for equitable high-quality care and health outcomes in the context of non-communicable diseases (GACD)

Call: Cluster 1 - Health (Single stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health's programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of</p>

	Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Tackling diseases and reducing disease burden”. To that end, proposals under this topic should aim to deliver results that are directed, tailored towards and contributing to some of the following expected outcomes:

- Healthcare practitioners and providers in low- and middle-income countries (LMICs)¹¹⁵ and/or those in high-income countries (HICs) serving disadvantaged populations have access to information allowing to strengthen health systems for equitable high-quality care and health outcomes in the context of non-communicable diseases (NCDs).
- Public health managers and authorities have access to improved insights and evidence on how to decrease the fragmentation of care for patients living with NCDs and ensure continuity of care across all stages of disease progression, including prevention, risk reduction, and timely diagnosis of NCDs. They use this knowledge to design policies to reduce health inequities and to promote equitable health outcomes.
- Researchers, clinicians and authorities have an improved understanding how the proposed interventions for strengthening health systems for equitable high-quality care and health outcomes in the context of NCDs could be adopted in LMICs and/or disadvantaged populations of HICs setting, taking into account specific social, political, economic and cultural contexts.
- Communities, local stakeholders and authorities are fully engaged in implementing and taking up interventions that strengthen health systems for equitable high-quality care and health outcomes in the context of NCDs and thus contribute to deliver better health, improve quality of life across the life course and extend healthy life expectancy.

Scope: The European Commission is a member of the Global Alliance for Chronic Diseases (GACD)¹¹⁶. The GACD specifically addresses NCDs and supports implementation science to improve health outcomes. This topic is launched in concertation with the other GACD members (international funding agencies) and aligned with the 10th GACD call.

Health systems in many countries have not kept pace with the rapid emergence of NCDs that require costly long-term care and treatment. Resilient, fit for purpose health system should provide high-quality, safe, equitable, accessible healthcare, that reflects the needs of the

¹¹⁵ As defined by the World Bank.

¹¹⁶ <https://www.gacd.org>

population, and enables the integration of healthcare across the care continuum, encompassing prevention, screening, diagnosis and long-term management of NCDs¹¹⁷. While health systems across the world struggle with these challenges, this is a particular problem in LMICs that have relatively overburdened, poorly resourced and fragile health systems that struggle to cope with the burden of NCDs. Health inequalities (e.g. linked to geographical location, socioeconomic status, sex and/or gender, ethnicity, disability) are often accentuated by structural and/or systemic weaknesses such as lack of staff and appropriate medicines.

The increasing burden of NCDs on healthcare systems has spurred a greater interest in exploring strategies to tackle these conditions, including a move from a healthcare system focused on disease and hospital-based care, to a more holistic model, involving communities and primary care, and focused on maintaining health^{118,119}. These include interventions addressing the integration of and access to care, screening, access to medicines and technologies, task shifting and digital health interventions. Implementing these strategies while retaining a focus on equity is challenging and health systems need to account for geographical disparities as well as reach communities that have traditionally suffered health inequalities. Equity in health requires that resources and processes are designed to promote equalisation of health outcomes for populations experiencing health disparities, to ensure similar health outcomes for all of society¹²⁰.

Evidence for how to strengthen health systems to improve services and ensure equitable health outcomes is emerging, mostly from research in HICs. However, implementing equity-oriented interventions for transformation and/or strengthening of health systems remains challenging and largely unexplored in underserved populations, especially in LMICs. Providing evidence on implementation strategies that can enable effective adaptation and scaling of programmes will be critical to improving survival and quality of life as well as reducing disability, the burden of caretaking on (typically female) family members and costs of healthcare falling on households.

This implementation research topic is therefore focused on strategies to support health system transformation and/or strengthening using evidence-based interventions in the context of NCDs that can be adapted to and implemented in LMICs and/or disadvantaged populations experiencing health disparities in HICs to encourage equitable health outcomes.

The proposed implementation research should be focused on one or more evidence-based interventions (or complex interventions) focused on building equity-orientated health systems change to tackle the growing burden of chronic conditions, including NCDs. The choice of intervention(s) and provision of existing evidence of the intervention's effectiveness, cost-

¹¹⁷ Kruk ME, Pate M, Mullan Z. Introducing The Lancet Global Health Commission on High-Quality Health Systems in the SDG Era. *Lancet Glob Health*. 2017 May;5(5):e480-e481.

¹¹⁸ Hunter DJ, Bengoa R, Meeting the challenge of health system transformation in European countries, *Policy and Society*, Volume 42, Issue 1, March 2023, Pages 14–27.

¹¹⁹ The WHO has produced a series of recommendations for strengthening health systems, to improve capacity and services to tackle NCDs, with an eye to understanding how the service improvement will be scaled up system-wide; https://apps.who.int/gb/ebwha/pdf_files/WHA66-REC1/A66_R1_ANX4-en.pdf

¹²⁰ Health equity is achieved when everyone can attain their full potential for health and wellbeing.

effectiveness, sustainability, scalability and potential for long-term health and other impacts should be justified (and in what context this evidence has been generated). As the evidence underpinning strategies to transform and/or strengthen health systems in the context of NCDs is still emerging, particularly in LMICs, a limited period of testing the effectiveness of an intervention that the applicant's team has adapted for local implementation is therefore usually appropriate.

Applicants should explore the implementation of proposed intervention(s) for a selected study population(s) taking into account the unique social, political, economic, and cultural context(s) in which the study will take place. Applicants should justify why any adaptation will not compromise the known effectiveness of the selected intervention(s).

Proposals should address all the following activities¹²¹:

- Provide a research plan using validated implementation research frameworks or hybrid design research;
- Have an appropriate strategy for measuring implementation research outcomes and real-world effectiveness outcomes and indicators. Other health or non-health outcome measures, especially those identified as important by patient participants and/or critical for advancing Universal Health Coverage (UHC)¹²², are also welcome;
- Specifically address health equity and the principles of UHC;
- Engage an appropriately expert and skilled research team which can ensure a suitable multidisciplinary approach and that demonstrates equitable partnership and shared leadership between HIC-LMIC, and/or non-Indigenous-Indigenous members of the project team and external stakeholders through a clear governance strategy;
- Provide a stakeholder engagement strategy with evidence of support/engagement from key stakeholders for delivering patient-centred care;
- Ensure that project partners are engaged from the beginning to contribute to the sustainability of the intervention after the end of project. Proposals should demonstrate sustainability of the strategy, beyond the lifespan of the project;
- Provide opportunities for implementation research capacity building for early career researchers and team members from lower resourced environments, such as LMICs or disadvantaged communities;

¹²¹ The following types of proposals are not in the scope of this topic: i) proposals with the primary aim of informing the development and/or selection of an intervention for a given context, where the implementation component will be explored in a future project (i.e. standalone feasibility projects); ii) epidemiological cohorts; iii) etiological work, mechanistic, or epidemiological research, unless an essential component of a focused study to develop implementation research approaches; iv) clinical trials, validation studies, or intervention efficacy studies for a new or established pharmacological agent or behavioural intervention.

¹²² <https://www.who.int/health-topics/universal-health-coverage>

- Ensure meaningful involvement of early career team members, including at least one early career member as a co-investigator.

The study population may include the general population, people with one or more existing NCDs, those currently without NCDs, or a combination of both. The study population may also include patients with NCDs and chronic infectious disease(s) (e.g., studies that focus on integrating NCD management into an HIV or tuberculosis clinic). With regard to NCDs, applicants are encouraged to explore any chronic non-communicable condition (or combination of conditions), including mental health disorders, neurological disorders and sleep disorders.

Proposals are expected to use an appropriate implementation research design and frameworks for feasibility studies, cluster randomised control trials (cRCTs), before and after studies, and additional implementation science classifications of study designs (e.g. hybrid designs)^{123,124}.

Applicants are not limited to use any particular design, however a validated implementation research framework should underpin the study.

Proposals would be expected to generate evidence that is of direct relevance to policymakers, communities and practitioners. Also, proposals will require a strategy to include the relevant policymakers, local authorities, as well as other stakeholders such as community groups, or other individuals or organisations involved in the implementation of the intervention, with co-creation from the development of the project through to the implementation knowledge translation phase. Applicants should also provide a clear plan for continuing to engage with stakeholders.

Stakeholders also include patients, their family members and carers. Their contributions should be nurtured through meaningful engagement from the outset, not only as participants in the research undertaken. Patient engagement throughout the research project is critical to developing patient-centred models of care.

All stakeholders should be engaged at every stage of the research project, from initial ideation of research questions, throughout the duration of the project, and afterwards during the

¹²³ Examples of frameworks include (this list is not exclusive): i) Consolidated Framework for Implementation Research (CFIR); ii) the context enhanced (RE-AIM) Reach, Effectiveness, Adoption, Implementation, Maintenance); iii) Practical Robust Implementation and Sustainability Model (PRISM) frameworks.

¹²⁴ The following are potential interventions or strategies that applicants may consider in their implementation plan (please note that this is not an exhaustive list): i) Strengthening within the workforce including: training; task shifting within healthcare services; multi-disciplinary teams; community outreach; and the care continuum; ii) Changes in health or related facilities, including relationships, engagement and linkages between facility levels (primary, secondary, tertiary), regional specialist care, pharmacies, and community healthcare; iii) Digital or information technologies in health systems to improve condition management; shared records; coordination in continuum of care; self-management and equitable health outcomes; iv) Implementation of new technologies, innovations for screening, earlier diagnosis and better management of NCDs; v) Ensuring equitable access to good quality medicines (priority medicine lists and financing, monitoring; procurement and distribution; charging and fees); vi) Health policy entrepreneurship linked to solving or capitalizing a policy or practice issues/innovations that have a clear link with service delivery or health promotion with NCDs.

knowledge translation phase. It is also important to include stakeholders who can help sustain the project's implementation, facilitate scale up, and use the knowledge generated from the project after the grant ends.

Poverty, racism, gender inequality, ethnic discrimination, and other inequities are directly associated with reduced potential for equitable access to quality care. Proposals should consider the social determinants of health and discuss their potential impact on the effective implementation of the intervention(s). If there is a focus on a particular population (e.g., gender, race and/or ethnicity), then the reason for this should be justified.

In order to promote health equity, proposals should aim to address differences in intervention access, uptake, and effectiveness in socially disadvantaged groups and develop strategies for reducing inequities. To facilitate this process at the data analysis stage, studies should be designed to address such differences. At a minimum, studies should capture and disaggregate data on sex and/or gender differences. If feasible, a plan for capturing intersectional impacts on health outcomes should be included in the analysis strategy.

This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

All projects funded under this topic are strongly encouraged to participate in networking and joint activities, including internationally, as appropriate. These activities could, for example, involve the participation in joint workshops, the Annual Scientific Meetings of the GACD, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. Therefore, proposals are expected to include a budget for such activities and may consider covering the costs of any other potential joint activities without the prerequisite to detail concrete joint activities at this stage. The details of these joint activities will be defined during the grant agreement preparation phase.

Applicants envisaging to include clinical studies¹²⁵ should provide details of their clinical studies in the dedicated annex using the template provided in the submission system.

HORIZON-HLTH-2025-01-DISEASE-07: Tackling high-burden for patients and under-researched medical conditions

Call: Cluster 1 - Health (Single stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal

¹²⁵ Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

	requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health's programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>In order to ensure a balanced project portfolio with regard to the medical condition targeted¹²⁶, grants will be awarded (within available budget) to proposals not only in order of ranking but also in function of the highest ranked proposals in different medical conditions, provided that the applications attain all thresholds available.</p>

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Tackling diseases and reducing disease burden”. To that end, proposals under this topic should aim to deliver results that are directed, tailored towards and contributing to most of the following expected outcomes:

- The scientific and clinical communities make effective use of state-of-the-art information, data, technologies, tools and best practices to better understand the condition, underpinning the development of diagnostics, therapeutics and/or preventive strategies.
- The scientific and clinical community exchange data, knowledge and best practices, thereby strengthening their collaboration and building knowledge and care networks in Europe and beyond.

¹²⁶ Medical condition i to v, as given in the scope of this topic.

- The scientific and clinical community make wide use of newly established and where relevant open access databases and/or integrate them with existing infrastructures for storage and sharing of collected data according to FAIR¹²⁷ principles, thereby encouraging further use of the data.
- Policymakers and funders are informed of the research advances made and consider further support in light of the sustainability of the studies.
- Patients and caregivers are constructively engaged with the research, which also caters for their needs.
- Health professionals have access to and use improved clinical guidelines on diagnosis and/or treatment of the condition.

Scope: A number of medical conditions fail to be recognised and/or be correctly diagnosed in a significant proportion of patients. As a consequence, they are inadequately treated and often can become a chronic and high burden for the patient. These medical conditions¹²⁸, including:

- i. myalgic encephalomyelitis/chronic fatigue syndrome,
- ii. autism,
- iii. gynaecological diseases,
- iv. low back pain,
- v. other¹²⁹,

may be insufficiently researched even though they manifest with high prevalence.

Applicants should explicitly state in their proposal which of the above medical conditions is targeted and the proposed work should address only this specific medical condition. Please note that the following medical conditions are not in the scope of this topic: rare diseases, including rare cancers, and under-research medical conditions already addressed by projects funded under topic HORIZON-HLTH-2024-DISEASE-03-14-two-stage¹³⁰.

Research actions under this topic should include all the following activities, ensuring multidisciplinary approaches and a broad representation of stakeholders in the consortia:

¹²⁷ See definition of FAIR data in the introduction to this work programme part.

¹²⁸ High-burden medical conditions could for instance include those that are either life-threatening or lead to chronic invalidity or a severely reduced quality of life.

¹²⁹ The European Commission commissioned an independent scoping study to help identify high-burden under-researched medical conditions and define the type of research and/or research priorities to better address the different needs of patients with these conditions. The study delivered a discussion paper with a non-exhaustive list of conditions/groups of disorders identified as being high-burden and under-researched. This document is available at <https://op.europa.eu/en/publication-detail/-/publication/eae32303-96e3-11ed-b508-01aa75ed71a1/language-en>

¹³⁰ [https://cordis.europa.eu/search?q=programme%2Fcode%3DHORIZON-HLTH-2024-DISEASE-03-14-two-stage'](https://cordis.europa.eu/search?q=programme%2Fcode%3DHORIZON-HLTH-2024-DISEASE-03-14-two-stage)

- Proposals should address the gaps in robust, scientific evidence for improved policies and practices to tackle such a medical condition and aim at identifying the pathophysiological mechanism(s) (e.g. genetic, cellular and molecular) and potential risk factors (e.g. psychological and environmental) of the medical condition through basic, pre-clinical and/or clinical research. These efforts should underpin the development of diagnostics, therapeutics, and/or preventive strategies for the condition.
- Proposals should demonstrate that the medical condition under study is insufficiently understood, inaccurately diagnosed or inadequately treated in a significant proportion of patients, and as such represent a high burden for patients and society. This could be through referencing key literature.
- Sex and gender-related aspects, age, ethnicity, socio-economic, lifestyle and behavioural factors should be taken into consideration. In addition, the emotional and societal long-term effects of these chronic disorders for the affected individuals should be addressed.
- Where applicable, the development of biomarkers and other technologies for diagnosis, monitoring in patients, and stratification of patient groups should be considered.
- Where applicable, the development of clinically relevant, (non-)human model systems that can complement clinical investigations should be considered.
- Exploitation of existing data, biobanks, registries and cohorts is expected, together with the generation of new (e.g. genomics, epigenomics, transcriptomics, proteomics) data.
- To enable sharing of samples, quality data and advanced analytical tools, it is encouraged to make use of existing infrastructures developed at the European¹³¹ or national level.
- Inclusion of patients or patient organisations in the research is strongly encouraged, to ensure that their views are considered.
- Participation of startups and small and medium-sized enterprises (SMEs) is strongly encouraged.

This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Applicants should provide details of their clinical studies¹³² in the dedicated annex using the template provided in the submission system. As proposals under this topic are expected to include clinical studies, the use of the template is strongly encouraged.

¹³¹ A variety of infrastructures have been developed at European level and include, for example, the BBMRI-ERIC (<https://www.bbMRI-eric.eu>) research infrastructure for biobanking, while others are being developed like the federated European infrastructure for genomics data.

HORIZON-HLTH-2025-02-DISEASE-01: European Partnership for Brain Health

Call: Partnerships in Health (2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 150.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 150.00 million.
<i>Type of Action</i>	Programme Co-fund Action
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health's programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding. Because the US contribution will be considered for the calculation of the EU contribution to the partnership, the concerned consortium of research funders from eligible EU Members States and Associated Countries must expressly agree to this participation.</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. Financial support provided by the participants to third parties is one of the primary activities of the action in order to be able to achieve its objectives. Given the type of action and its level of ambition, which could entail costly pilot clinical studies, the maximum amount to be granted to each third party is EUR 3.00 million. However, if the objectives of the action would otherwise be impossible or overly difficult (and duly justified in the proposal) the maximum amount may be higher.</p>

¹³² Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

	The funding rate is up to 30% of the eligible costs.
<i>Total indicative budget</i>	The total indicative budget for the topic is EUR 150 million committed in annual instalments over the 3 years, 2025-2027 (EUR 56.5 million from the 2025 budget, EUR 46.5 million from the 2026 budget and EUR 47 million from the 2027 budget).

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Tackling diseases and reducing disease burden”. To that end, proposals under this topic should aim to deliver results that are directed, tailored towards and contributing to all the following expected outcomes:

- The position of the EU and Associated Countries is strengthened as an internationally recognised driver of research and innovation on brain health¹³³, thereby contributing to the achievement of the Sustainable Development Goals related to neurological and mental health.
- Research funders align, adopt and implement their brain health research policies allowing for the optimal generation and translation of knowledge into tailored health products and interventions to (i) promote brain health throughout the lifetime, (ii) prevent neurological and mental disorders, and (iii) improve diagnosis, treatment and care to enhance the quality of life of those living with brain disorders, as well as their caregivers, whilst also considering cultural, ethical, legal and social aspects.
- Research funders, policymakers, relevant agencies and authorities, researchers, innovators, citizens, people living with brain disorders and their caregivers and advocates enhance their collaboration forming a strong, structured and integrated research and innovation ecosystem with shared evidence, tools and methodologies cutting across sectors.
- The brain health research community at large benefits from and uses an improved comprehensive knowledge framework integrating the EU, national/regional data and information infrastructures to improve transnational research.
- People living with a brain disorder benefit from (i) a more timely, equitable access to accurate diagnosis and tailored care and treatment options in an innovative, sustainable and high-quality healthcare system that is well integrated with the research community, and from (ii) less discrimination and stigma, and social inclusion.
- Public and private actors, including civil society (e.g. Non-Governmental Organisations, charities), establish coordinated and efficient multi-stakeholder collaborations at national

¹³³ In the context of the partnership, ‘brain health’ should be interpreted along the lines of the World Health Organisation’s (WHO) definition (‘Brain health is the state of brain functioning across cognitive, sensory, social-emotional, behavioural and motor domains, allowing a person to realise their full potential over the life course, irrespective of the presence or absence of disorders’) and includes both neurological and mental health.

level in the EU and Associated Countries, allowing for more effective basic and clinical research and enhanced translation into tailored products and interventions.

Scope: The partnership should contribute from the research and innovation angle to priorities set in the “Healthier Together - EU Non-Communicable Diseases Initiative” (2022-2027), which includes a focus area on mental health and neurological disorders¹³⁴, as well as to the “Communication on a comprehensive approach to mental health” (COM(2023) 298 final)¹³⁵.

The partnership should also contribute from the research and innovation angle to achieving the objectives of the Pharmaceutical Strategy for Europe¹³⁶, in terms of fulfilling unmet medical needs (numerous in the fields of neurological and mental disorders) and to ensuring that the benefits of innovation reach patients in the EU and Associated Countries. Moreover, it should support the objectives of the EU4Health Programme¹³⁷.

Additionally, the partnership should contribute from the research and innovation angle to the “Communication on the European Care Strategy” (for caregivers and care receivers; COM(2022) 440 final)¹³⁸, which aims to ensure high quality, affordable and accessible care services for all ages. By fostering data sharing and boosting FAIR¹³⁹ and open data, the partnership should also contribute to the implementation of the European Health Data Space (EHDS)¹⁴⁰.

Thanks to its capacity to bring together different stakeholders (e.g. research funders, health authorities, citizens, healthcare providers, innovators, policymakers), the partnership will create a critical mass of resources to implement a long-term Strategic Research and Innovation Agenda (SRIA), based on the work of the Coordination and Support Action BrainHealth¹⁴¹.

The co-funded European Partnership for Brain Health should be implemented based on the priorities identified in the SRIA and through a joint programme of activities ranging from coordinating and funding transnational research to integrative activities aimed at structuring and enhancing the broader research and innovation ecosystem and facilitating the way research and innovation is carried out, and also delivering impact. Examples include (i) facilitating the sharing and analysis of data and samples, (ii) promoting harmonisation and standardisation efforts, (iii) providing input to shape the services provided by research infrastructures (based on the needs of the research community), as well as (iv) networking, training and dissemination activities.

It should be structured along the following main objectives:

¹³⁴ https://health.ec.europa.eu/publications/eu-non-communicable-diseases-ncds-initiative-guidance-document_en

¹³⁵ https://health.ec.europa.eu/publications/comprehensive-approach-mental-health_en

¹³⁶ https://health.ec.europa.eu/medicinal-products/pharmaceutical-strategy-europe_en

¹³⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0522>

¹³⁸ <https://ec.europa.eu/social/main.jsp?langId=en&catId=89&furtherNews=yes&newsId=10382>

¹³⁹ See definition of FAIR data in the introduction to this work programme part.

¹⁴⁰ https://health.ec.europa.eu/ehealth-digital-health-and-care/european-health-data-space_en

¹⁴¹ <https://www.brainhealth-partnership.eu>

- Strengthening collaboration, strategic alignment and global dialogue: engage and collaborate with key stakeholders, not only those participating in existing EU-supported brain research initiatives but also beyond them, whilst also seeking alignment with these and international initiatives, including other European partnerships.
- Jointly supporting research and innovation: launch joint transnational calls underpinning the brain health research and innovation priorities, as defined in the SRIA, and based on annual work plans. Calls include research calls, networking calls, and those that relate to ethical, legal and social/societal aspects.
- Facilitating the use of infrastructures and platforms in the EU and Associated Countries: improve access to and use of these infrastructures and platforms (e.g. ECRIN¹⁴², EATRIS¹⁴³, EBRAINS¹⁴⁴, BBMRI¹⁴⁵, EuroBioImaging¹⁴⁶, European Genomic Data Infrastructure¹⁴⁷, etc.), whilst also providing input for shaping the services for the brain health research and funding community. This also covers the facilitation of data sharing by boosting FAIR and open data and improving interoperability and harmonisation.
- Bridging with healthcare providers, the private sector, regulators, and policymakers: enable the translation of research results into accessible, tailored products, technologies, interventions and policies through collaborations, including with institutionalised European partnerships (e.g., Innovative Health Initiative).
- Empowering citizens, people living with brain disorders and patients, families and caregivers (including informal): enable them to be active in their health trajectories via the dissemination of good practices and scientific outputs, as well as trainings to engage them along the whole spectrum of the research process.
- Capacity building in research: support networking and training of scientists, healthcare practitioners, health policy experts, innovators and other professionals contributing to preserve and improve brain health.

The partnership is open to all EU Member States, as well as to countries associated to Horizon Europe and will remain open to third countries wishing to join. Importantly, the EU contribution will not be increased should countries join after signing of the grant agreement.

The partnership should include or engage with the following actors: (i) Ministries in charge of R&I policy, as well as national and regional R&I and technology funding agencies and foundations; (ii) Ministries in charge of health and care policy, as well as national and regional healthcare authorities, organisations and providers; (iii) academic researchers; (iv) research infrastructures; (v) patients organisations; (vi) industry; (vii) research and technology organisations; (viii) private sector; and (ix) charities.

¹⁴² <https://ecrin.org>

¹⁴³ <https://eatris.eu>

¹⁴⁴ <https://www.ebrains.eu>

¹⁴⁵ <https://www.bbmri-eric.eu>

¹⁴⁶ <https://www.eurobioimaging.eu>

¹⁴⁷ <https://gdi.onemilliongenomes.eu>

The partnership may also encourage engagement with other relevant Ministries (e.g., related to employment, education, etc.) and research funders. It should involve other key actors from civil society and end-users, research and innovation community, innovation owners, health and care systems owners/organisers and health and care agencies.

The partnership should build on and go beyond existing and previous initiatives, including the ERA-NET actions under (i) the EU Joint Programme for Neurodegenerative Disease Research (JPND)¹⁴⁸, (ii) the Network of European Funding for Neuroscience Research (NEURON)¹⁴⁹, and (iii) the Human Brain Project¹⁵⁰ (HBP, a FET Flagship project), as well as the digital research infrastructure EBRAINS¹⁵¹, which was put in place by HBP, and the Coordination and Support Actions (CSAs) BrainHealth¹⁵² and European Brain Research Area (EBRA)¹⁵³.

The partnership's governance structure should engage upfront the relevant actors to coordinate, steer and frame the research and innovation activities, and facilitate the use and uptake of the results. The governance should involve key stakeholders, including but not limited to the research and innovation community, patients and citizens, health and care professionals, formal and informal care organisations, and innovation owners. Transparency in governance should be secured (e.g. in calls, governing bodies, etc.).

To ensure coherence and complementarity of activities and leverage knowledge and investment possibilities, the partnership is expected to establish relevant collaborations with other Horizon Europe partnerships (institutionalised and co-funded) and missions, as set out in the working document on 'Coherence and Synergies of candidate European Partnerships under Horizon Europe'¹⁵⁴, as well as to explore collaborations with other relevant activities at EU and international level. The proposal should also elaborate on possible synergies with other EU programmes, including EU4Health and the Digital Europe Programme (DIGITAL). The Partnership should align with EU-wide initiatives on open access and FAIR data, including the European Open Science Cloud (EOSC)¹⁵⁵.

To tackle the ambitious challenges, cooperation with international organisations, private sector and non-European institutions and experts may be considered. Participation of third countries is encouraged. Applicants should describe in their proposal the methodology for their collaboration and the aims they want to achieve with this kind of collaboration.

Proposals should pool the necessary financial resources from the participating national research programmes with a view to implementing joint calls for transnational proposals

¹⁴⁸ <https://www.neurodegenerationresearch.eu>

¹⁴⁹ <https://www.neuron-eranet.eu>

¹⁵⁰ <https://www.humanbrainproject.eu/en>

¹⁵¹ <https://ebrains.eu>

¹⁵² <https://www.brainhealth-partnership.eu>

¹⁵³ <https://www.ebra.eu>

¹⁵⁴ https://research-and-innovation.ec.europa.eu/document/download/846561ef-7696-4957-802a-69d19ea6b739_en?filename=ec_rtd_coherence-synergies-of-ep-under-he.pdf

¹⁵⁵ https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/open-science/european-open-science-cloud-eosc_en

resulting in grants to third parties. Financial support provided by the participants to third parties is one of the activities of this action in order to be able to achieve its objectives.

When defining calls for proposals, this partnership needs to consider the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities. In addition, this partnership needs to integrate robust sex and gender considerations, applying an intersectional lens to investigate variations in mental, neurological and neurodegenerative conditions. This includes examining how characteristics such as sex, gender, age, racial/ethnic background, and disability intersect to influence disease/disorder prevalence, prevention, and outcomes.

The expected duration of the partnership is seven to ten years.

Projects funded by the European Partnership for Brain Health will be strongly encouraged to participate in networking and joint activities with relevant projects at European and national levels.

HORIZON-HLTH-2025-02-DISEASE-02: European partnership fostering a European Research Area (ERA) for health research (Phase 2)

Call: Partnerships in Health (2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 77.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 77.00 million.
<i>Type of Action</i>	Programme Co-fund Action
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The proposal must be submitted by the coordinator of the consortium funded under topic HORIZON-HLTH-2022-DISEASE-03-01: "European partnership fostering a European Research Area (ERA) for health research". This eligibility condition is without prejudice to the possibility to include additional partners.</p> <p>The proposed EU contribution of Phase 2 devoted to activities related to funding multi-country Investigator-Initiated Clinical Studies must be between 60% and 70% of the EU contribution of Phase 2.</p> <p>In recognition of the opening of the US National Institutes of Health's</p>

	programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding. Because the US contribution will be considered for the calculation of the EU contribution to the partnership, the concerned consortium of research funders from eligible EU Members States and Associated Countries must expressly agree to this participation.
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>If the proposal is successful, the next stage of the procedure will be grant agreement amendment preparations.</p> <p>If the outcome of amendment preparations is an award decision, the coordinator of the consortium funded under topic HORIZON-HLTH-2022-DISEASE-03-01: "European partnership fostering a European Research Area (ERA) for health research" will be invited to submit an amendment to the grant agreement, on behalf of the beneficiaries.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>This action is intended to be implemented in the form of an amendment of the grant agreement concluded pursuant to Article 24(2) of the Horizon Europe Regulation.</p> <p>For the additional activities covered by this action:</p> <ul style="list-style-type: none"> • The funding rate is 30% of the eligible costs. • Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. Financial support provided by the participants to third parties is one of the primary activities of this action in order to be able to achieve its objectives. Given the novelty of funding multi-country clinical studies which can result in different strategies being implemented (e.g. a few projects with relatively high budget per partner) and taking into consideration that clinical studies entail very high costs, the maximum amount to be granted to each third party is EUR 10.00 million for the duration of the partnership. However, if the objectives of the action would otherwise be impossible or overly difficult (and duly justified in

	<p>the proposal) the maximum amount may be higher.</p> <ul style="list-style-type: none"> • The starting date of the grant awarded under this topic may be as of the submission date of the application. Applicants must justify the need for a retroactive starting date in their application. Costs incurred from the starting date of the action may be considered eligible (and will be reflected in the entry into force date of the amendment to the grant agreement).
<i>Total indicative budget</i>	The total indicative budget for the duration of the co-funded Partnership is EUR 110 million.

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of Destination “Tackling diseases and reducing disease burden”. To that end, the proposal under this topic should aim to deliver results that are directed, tailored towards and contributing to all the following expected outcomes:

- Based on a trusted governance and effective working modalities, research funders, health policymakers and the research community work together in order to identify and prioritise topics of common interest and European benefit;
- Research funders and policymakers support the generation of knowledge related, but not limited, to cardiovascular diseases, prevention and public health, diet related diseases and nano medical technologies, and have access to and make use of the evidence on the benefits and drawbacks of health interventions, in particular for optimising clinical management, patient safety, personalised medicine (coordinating with the European Partnership for Personalised Medicine) and avoiding overtreatment;
- In addition to the well-established regular Joint Transnational Calls in the area of pre-clinical research, research funders and policymakers use the funding scheme developed in the Phase 1 of the European partnership fostering a European Research Area (ERA) for health research (ERA4Health) to support testing of health interventions in the clinical setting at European level. Therefore, the research community, independently from private interest, can conduct large-scale multi-country Investigator-Initiated Clinical Studies (IICSs)¹⁵⁶ of various health interventions addressing important public health needs in a seamless way, effectively addressing known challenges and obstacles related to, for example, appropriate study design, ethics (including special patient groups¹⁵⁷), regulatory and institutional approvals, patient recruitment, management of informed consent, as well as, biobanking of human samples;

¹⁵⁶ In this text, IICS means a clinical study in which a health technology (e.g. a medicinal product, a medical device, an *in vitro* diagnostic medical device, a surgical or other medical intervention) is tested in humans, independently from commercial interest and for public health benefits.

¹⁵⁷ The Pharmaceutical Strategy for Europe refers to including representative participation of population groups, for example gender and age groups, that are likely to use the medicinal product investigated in the clinical trials to ensure appropriate safety and efficacy.

- Public health research systems in the ERA are more effective and integrated. Utilisation of health services, preventative measures, technologies, tools and digital solutions are more cost-effective;
- Health and care authorities, policymakers and other stakeholders use the research results to develop evidence-based strategies and policies, and deploy good practices to European countries and regions;
- Patients and citizens are more knowledgeable about disease threats and contribute to a patient-centred decision-making process, assuring better adherence to knowledge-based disease management strategies and policies;
- Countries cooperate better and use context-specific knowledge and evidence to make their health and care systems more sustainable and resilient with respect to upcoming needs and crises (complementary with other current and future co-funded European Partnerships with which strong links will be established).

Scope: There is a need for health research at the EU and Associated Countries level to be more efficient in delivering safer, better and higher-quality solutions for prevention, detection, diagnosis, treatment, and management of diseases, as well as providing better and equal access and affordable healthcare systems to the citizens. Additionally, the high quality of evidence generated by the large multi-country clinical trials comparing to fragmented national or regional efforts confirmed the added value of multinational collaboration, supported by multinational funding schemes. In this regard, a European partnership proposing a new model for impactful multinational collaborations in funding health research is a key initiative to play a central role in addressing public health needs.

ERA4Health¹⁵⁸ - “Fostering a European Research Area for Health Research” - (Grant Agreement: 101095426) is a co-funded European Partnership in health research that aims to increase European transnational collaborative research funding by creating a funding body for joint programming in priority areas addressing European public health needs. It started in November 2022 and brings together 33 entities from 22 countries from the EU as well as Associated and Third countries. During Phase 1 (first 2 years), the main activities of the ERA4Health consortium were:

- organisation of 4 Joint Translational Calls (JTCs) focused on prevention and public health, nutrition and lifestyle-related diseases, cardiovascular diseases and nanomedicine;
- analysis of challenges and bottlenecks for investigator-initiated clinical research in the EU and Associated Countries, preparation of the supporting framework and a launch of a pilot JTC on multi-country IICS;

¹⁵⁸

<https://era4health.eu>

- developing collaboration on transversal activities, including for instance Responsible Research and Innovation guidelines, enhancing the ERA and health ecosystem, capacity building, patient safety, etc.

Taking into account that the present action is a continuation of the topic HORIZON-HLTH-2022-DISEASE-03-01 “European partnership fostering a European Research Area (ERA) for health research” and foresees an amendment to the existing grant agreement, the proposal should present the additional activities (including additional partners) to be covered by the award primarily in terms of grant agreement revisions.

The award of a grant to continue the Partnership in accordance with this call should be based on a proposal submitted by the coordinator of the consortium funded under HORIZON-HLTH-2022-DISEASE-03-01 “European partnership fostering a European Research Area (ERA) for health research” and the additional activities (which may include additional partners) to be funded by the grant should be subject to an evaluation. This evaluation should take into account the existing context and the scope of the initial evaluation as relevant, and related obligations enshrined in the grant agreement.

In this context, based on the funding scheme to support non-commercial clinical research developed during Phase 1, the main activities of the ERA4Health partnership in Phase 2 will mostly focus on additional JTCs on multi-country IICS in well-defined priority areas. In addition, the partnership’s activities initiated in Phase 1 will also be continued in Phase 2. The unique composition of the consortium gathering national funders with their competency and experience in funding health research, and links to respective ministries of research and/or health in their home countries or regions guarantees successful continuation of the current partnership via this non-competitive call under an Article 24(2) Horizon Europe Regulation action that allows for the addition of new activities to existing grant agreements (also including new additional partners where relevant).

Phase 2 will benefit from the already established effective governance mechanism to achieve the following additional objectives:

- Bringing together different stakeholders (e.g. research funders, health authorities, health and care institutions, innovators, policymakers), to update and implement the Partnership’s long-term Strategic Research and Innovation Agenda that should reflect more extended focus on multi-country IICS in the EU and Associated Countries.
- Using the novel funding mechanism developed during Phase 1, to enlarge the Partnership’s activities related to non-commercial clinical studies, including identification of specific topics, pooling of funding, and launching JTCs for EU- and Associated Countries-wide multi-country IICSs on various health interventions¹⁵⁹ addressing important public health needs.

¹⁵⁹ Wide definition of health intervention: medicinal products, medical devices, surgical or other invasive procedures, other medical interventions including preventative measures.

- To continue providing support and building capacity, in particular in conducting multi-country IICSs at European scale.

All types of clinical studies falling under the Clinical Trials Regulation (EU) 536/2014, including low-interventional trials (e.g. pragmatic trials to optimise treatment), may be supported by this Partnership. In particular, proposed multi-country IICSs should i) establish new indications of a given existing health intervention for conditions where alternative solutions do not exist or are sub-optimal (repurposing); ii) optimise or develop new, personalised care pathways (avoiding overlaps with activities of the European Partnership for Personalised Medicine¹⁶⁰); iii) support the development of new health interventions with clear relative clinical efficacy/effectiveness compared to existing alternatives (including preventative measures); iv) accelerate the uptake of new interventions by healthcare systems.

Support by European research infrastructures, required to perform multinational clinical studies at scale, will, in particular, build on the asset of existing research infrastructures, such as the European Clinical Research Infrastructure Network (ECRIN)¹⁶¹ for sponsor-delegated activities related to implementation of clinical studies, and Biobanking and Biomolecular Resources Research Infrastructure (BBMRI)¹⁶² for the management of biosamples and linked data that are generated under the studies.

Through pooling existing resources, eliminating redundancies and reducing fragmentation, the implementation of multi-country IICSs supported by this Partnership will benefit from better access to a high number of study participants/patients, medical expertise and facilities, enhanced methodological standards and shared costs, tools and procedures. Additionally, large-scale IICSs generate data on safety and effectiveness of a health intervention, often in real-world settings. They thus provide evidence to answer questions that clinicians face in their day-to-day practice in order to optimise the clinical management of patients beyond the context of marketing authorisation application for medicinal products. All these aspects will contribute to generate robust and reliable clinical evidence, increase the potential for broad implementation of research outcomes; prevent duplication of research efforts and allow broad uptake by health systems.

In the context of new activities of Phase 2, this Partnership will be open to public funders of health research at both national and regional levels in the Member States, countries associated to Horizon Europe and to other health research funders such as philanthropic organisations. Additional, special attention should be placed on inclusion or engagement with the following actors:

- Ministries in charge of R&I policy, as well as national and regional R&I and technology funding agencies and foundations;
- Ministries in charge of health and care policy, as well as national and regional health and care authorities, organisations and providers.

¹⁶⁰ <https://www.eppermed.eu>

¹⁶¹ <https://ecrin.org>

¹⁶² <https://www.bbmri-eric.eu>

The Partnership may also encourage engagement with other relevant Ministries and research funders. It will involve other key actors from civil society and end-users, research and innovation community, innovation owners, health and care systems owners/organisers and health and care agencies.

Cooperation with international organisations, and non-European institutions and experts may be considered. Participation of third countries is encouraged. The commitments to the partnership of entities not eligible for funding will not be counted towards the calculation of the EU funding to the partnership. Third country applicants should describe in their proposal the modalities for their collaboration and the aims they want to achieve with this kind of collaboration.

The proposal should pool the necessary financial resources from the participating research programmes with a view to implementing joint calls for transnational proposals resulting in grants to third parties. Financial support provided by the participants to third parties is one of the primary activities of this action in order to be able to achieve its objectives.

When defining calls for proposals, this partnership needs to consider sex and gender-related differences and it needs to consider the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

The expected duration of Phase 2 of the partnership should not exceed nine years.

Destination - Ensuring equal access to innovative, sustainable, and high-quality healthcare

Topics under this destination are directed towards the Key Strategic Orientation 2 “*The Digital transition*” and Key Strategic Orientation 3 “*A more resilient, competitive, inclusive, and democratic Europe*” of Horizon Europe’s strategic plan 2025-2027.

Research and Innovation supported under this destination should contribute to the following expected impact, set out in the strategic plan impact summary for the Health Cluster: *“healthcare systems provide equal access to innovative, sustainable and high-quality healthcare thanks to the development and uptake of safe, cost-effective and people-centred solutions. This is to be accompanied by management models focusing on population health, health systems resilience, and health equity and patient safety, and also improved evidence-informed health policies”*.

Health systems are affected by limitations in sustainability and resilience, challenges which were reinforced by the COVID-19 crisis that also revealed inequalities in access to high-quality healthcare services. Our health systems need to become more effective, efficient, accessible, fiscally and environmentally sustainable, and resilient in order to cope with public health emergencies, support healthcare workforce, adapt to environmental challenges like climate change, and contribute to social justice and cohesion. The transformation and modernisation of our health systems will remain an important challenge for many years to come, but it also holds a significant opportunity to generate evidence, leverage existing and emerging solutions, implement digital and data-driven innovation and develop more accessible, cost-effective, flexible and equitable health systems.

Research and Innovation under this destination aim to support healthcare systems in their transformation to ensure fair access to high-quality, sustainable healthcare for all citizens. Funded activities should develop innovative, practical, financially sound, and scalable solutions across various dimensions of healthcare systems. These activities should improve governance and provide decision-makers with new evidence, innovative tools and technologies while ensuring long-term fiscal, environmental and climate sustainability, making sure the health sector reduces its carbon footprint and supports sustainable use of resources. A patient-centred approach should be adopted to improve patients’ health outcomes, empower patients, foster active dialogue among stakeholders (e.g., citizens, patients, caregivers, healthcare providers), and encourage social innovation. Support to healthcare professionals and providers, with an adequate allocation of resources according to citizen’s needs and preferences, are key in these Research and Innovation actions.

Research and Innovation should help deliver solutions that are scalable and transferable between different types of healthcare systems in different national, regional, and local contexts. It should also provide knowledge that supports the transfer of solutions between countries, including measures to address health inequalities. Research and Innovation activities under this destination will contribute to, among other things, the European care

strategy¹⁶³, the digital transformation of health and care in the EU¹⁶⁴, the EU digital strategy, the EU Artificial Intelligence Strategy¹⁶⁵, the strategic investment framework in trustworthy Artificial Intelligence for the Union¹⁶⁶, the EU strategy on adaptation to climate change¹⁶⁷, and the European Green Deal. They can also build upon and contribute to the Europe's Beating Cancer Plan¹⁶⁸ and Cancer Mission under Horizon Europe.

In this work programme part, the focus of this destination will be on:

- Enhancing healthcare efficiency and cost-effectiveness with Generative Artificial Intelligence (AI) solutions, augmented by other AI tools that aim to support healthcare professionals in decision making, offer improved personalised care, and to develop sustainable practices, by leveraging the availability of the different types of health data.
- Improving patient engagement and empowerment by increasing public knowledge, trust and acceptance of AI tools, leading to better understanding of medical information and to improved patient outcomes, while also improving the communication between patients and healthcare providers, as well as between healthcare providers.

To increase the impact of EU investments under Horizon Europe, the European Commission encourages and supports cooperation among EU-funded projects to foster cross-fertilisation and synergies. This includes networking, joint activities such as workshops, knowledge exchange, best practices development, and joint communication activities. Synergies can be explored not only between projects funded under the same topic, but also between projects funded under other topics, Clusters or pillars of Horizon Europe. For instance, collaborations may arise between projects related to European health research infrastructures (under Pillar I), the EIC strategic challenges on health (under Pillar III), or across the Clusters of Pillar II such as Cluster 2 “Culture, Creativity and Inclusive Society” focusing e.g., on the long-term sustainability of public health systems (e.g., economic and organisational models and measures for cost effectiveness and fiscal sustainability), or Cluster 4 “Digital, Industry and Space” focusing on the digitalisation of the health sector, including the use of AI.

Expected impacts:

¹⁶³ Communication from the European Commission on the European care strategy, COM(2022) 440, 7.9.2022

¹⁶⁴ Communication from the European Commission on enabling the digital transformation of health and care in the Digital Single Market; empowering citizens and building a healthier society, COM(2018) 233, 25.4.2018

¹⁶⁵ Commission Communication on Artificial Intelligence for Europe; COM(2018) 237 final: <https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence>; <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2018:237:FIN>

¹⁶⁶ Communication on boosting startups and innovation in trustworthy artificial intelligence | Shaping Europe's digital future (europa.eu): <https://digital-strategy.ec.europa.eu/en/library/communication-boosting-startups-and-innovation-trustworthy-artificial-intelligence>

¹⁶⁷ Commission Communication on Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change COM(2021) 82 final: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0082>

¹⁶⁸ Communication from the European Commission on Europe's Beating Cancer Plan, COM(2021) 44, 3.2.2021

Proposals for topics under this destination should set out a credible pathway to contributing to ensuring access to innovative, sustainable and high-quality healthcare, and more specifically to one or several of the following impacts:

- Health and social care services and systems have improved governance mechanisms, making them more effective, efficient, accessible, resilient, trusted and sustainable, both fiscally and environmentally. This includes shifting from hospital-centred to community-based, people-centred and integrated healthcare structures, embedding technological innovations and prioritising health promotion and disease prevention.
- Healthcare providers are trained and equipped with the skills and competences needed for future healthcare systems that are modernised, digitally transformed and equipped with safe innovative tools, technologies and digital solutions for healthcare. This will involve better patient management, improved patient engagement, reorganised workflows, and improved resource management.
- Citizens play a key role in managing their own healthcare, informal carers (including unpaid carers) are fully supported (e.g. by preventing overburdening and economic stress) and the specific needs of vulnerable groups are recognised and addressed. This includes improved access to healthcare services, financial risk protection, timely access to quality healthcare services including essential medicines and vaccines.
- Health policy and systems adopt a holistic approach - considering individuals, communities, organisations, society - in evaluating health outcomes, public health interventions, healthcare organisation, and decision-making. They benefit from evidence based, scalable and transferable healthcare solutions (e.g., between countries and healthcare settings) including for addressing health inequalities and ensuring environmental and climate sustainability in the health sector.

The actions resulting from the topics under this destination will also create strong opportunities for synergies with actions stemming from the EU4Health programme, in particular contributing to the goals under the general objective “*protecting people in the Union from serious cross-border threats to health*” and specific objective 4 “*to strengthen health systems, their resilience and resource efficiency*”.

The protection of European communication networks has been identified as an important security interest of the Union and its Member States. Entities that are assessed as high-risk suppliers¹⁶⁹ of mobile network communication equipment (and any entities they own or control) are not eligible to participate as beneficiaries, affiliated entities and associated partners to topics identified as “subject to restrictions for the protection of European

¹⁶⁹ Entities assessed as “high-risk suppliers”, are currently set out in the second report on Member States’ progress in implementing the EU toolbox on 5G cybersecurity of 2023 (NIS Cooperation Group, Second report on Member States’ progress in implementing the EU Toolbox on 5G Cybersecurity, June 2023) and the related Communication on the implementation of the 5G cybersecurity toolbox of 2023 (Communication from the Commission: Implementation of the 5G cybersecurity Toolbox, Brussels, 15.6.2023 C(2023) 4049 final).

communication networks”. Please refer to the Annex B of the General Annexes of this Work Programme for further details.

Proposals are invited against the following topic(s):

HORIZON-HLTH-2025-01-CARE-01: End user-driven application of Generative Artificial Intelligence models in healthcare (GenAI4EU)

Call: Cluster 1 - Health (Single stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 15.00 and 20.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health’s programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Ensuring equal access to innovative, sustainable, and high-quality healthcare”. To that end, proposals under this topic should aim to deliver results directed towards and contributing to all the following expected outcomes:

- Healthcare professionals, at all stages of healthcare provision, have access to user-centric, robust and trustworthy virtual assistant solutions based on Generative Artificial Intelligence (AI)¹⁷⁰ models and other AI tools to support them towards the provision of safer, more efficient and personalised care.
- Healthcare professionals benefit from cross-country applicable methodologies with the aim to facilitate acceptability, healthcare uptake and public trust of virtual assistant tools based on Generative AI models.
- Patients benefit from enhanced outcomes, more personalised care, and increased engagement with their healthcare professionals, leading to improved safety, quality of care, access to appropriate healthcare information and patient-doctor communication.
- Healthcare systems benefit from improved cost-effective patient outcomes, superior to standard of care in terms of accuracy, safety, and quality, and from cost-savings through advancements in highly accurate, transparent, traceable, and explainable solutions.

Scope: Healthcare professionals face important challenges related to efficiency, patient safety and provision of quality care with limited health systems' resources. Multimodality of health data combined with the available high-performance computing capabilities have the potential to empower effective and accurate use of trustworthy and ethical Generative AI-based solutions, augmented by other AI tools to address these challenges. Generative AI may benefit patients, healthcare professionals and health systems.

This topic will contribute to advancing and generating research to better understand and improve Generative AI-based virtual assistant solutions and their applicability in healthcare settings by improving patient health outcomes, fostering personalised healthcare and support the resilience, sustainability, and efficiency of the healthcare systems. In addition, the topic aims to also cover the understanding and mitigation of possible shortcomings (biases) and frameworks for monitoring and overseeing these solutions' use.

Research actions under this topic should include all the following activities, ensuring multidisciplinary approaches and a broad representation of stakeholders in the consortia (e.g. industry, academia, healthcare professionals, patients):

- Develop virtual assistant solutions based on new or optimised trustworthy and ethical Generative AI models, augmented by other AI tools to support healthcare professionals. The models should leverage extensive and diverse multimodal health and research data, public knowledge, and reliable healthcare systems information relevant for healthcare settings. Examples can include electronic health records, medical imaging, genomics, proteomics, molecular data, laboratory results, patient information (including on safety), and/or unstructured health data (the applicants may choose any type of available large-scale data). The development and training of the models should take place in

¹⁷⁰ Generative AI is a type of AI technology that can generate various forms of new content such as text, images, sounds, and even code, such as for programming or gene sequencing (<https://ec.europa.eu/newsroom/dae/redirection/document/101621>).

multinational consortia and federated governance approaches should be considered. The applicants should demonstrate how the project goes beyond combining existing data and generates new specific knowledge to improve clinical decision making.

- Demonstrate the added-value and clinical utility of the virtual assistant solutions in at least two healthcare use cases in different medical fields and unmet needs showing e.g. improved care management and efficiency, prediction of potential patient-specific therapeutic strategies and outcomes, etc. The applicants should provide evidence of high maturity technology for the use cases and assess the relative effectiveness of the solutions compared with standard of care, including on why these solutions would be superior to other AI tools and would deliver better outcomes. They should actively engage healthcare professionals as end users, and other stakeholders such as patients, caregivers in the development and testing of the solutions, ensuring that diverse perspectives and intersectional considerations are integrated throughout the process. Training and education activities for healthcare professionals should be organised.
- Develop a regulatory strategy/interaction plan with regulators (including in the area of Health Technology Assessment) for generating evidence, where relevant, in a timely manner. Consider also the potential for future regulatory impact of the results and sustainability aspects.
- Develop or adapt existing methodologies for continuous assessment of the developed solutions. The methodologies should demonstrate technical robustness, healthcare utility and trustworthiness of the Generative AI-based solutions, by adopting:
 - o Appropriate metrics for evaluating alignment with human values, ethical principles and the intended purposes of Generative AI models, performance including testing their technical robustness and clinical utility, as well as their model intelligibility, in view of ensuring AI trustworthiness¹⁷¹.
 - o Appropriate solutions to identify and mitigate potential bias¹⁷² of the models (e.g. representativeness of the data, bias of the trainer, bias of training and validation data, algorithmic discrimination and bias including gender bias etc.).
 - o Appropriate techniques to discover and demonstrate explainability of model reasoning, increase users' trust, and address the black box element, thus further enhancing transparency, model explainability and alignment.
 - o Methods to systematically address and assess ELSI (Ethical, Legal and Societal Implications), including data privacy concerns and risk of discrimination/bias (not limited to sex, gender, age, disability, race or ethnicity, religion, belief, minority

¹⁷¹ Ethics Guidelines for Trustworthy AI, published by the European Commission's High Level Expert Group on Artificial Intelligence: <https://ec.europa.eu/futurium/en/ai-alliance-consultation.1.html>

¹⁷² Guidelines on the responsible use of generative AI in research developed by the European Research Area Forum: https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/guidelines-responsible-use-generative-ai-research-developed-european-research-area-forum-2024-03-20_en

and/or vulnerable groups). The implication of medical errors originated from AI-assisted decision-making and the effects on potential legal liability for healthcare professionals should be explored.

All proposals should demonstrate EU added value by focusing on the development and/or use of trustworthy Generative AI models developed in the EU and Associated countries, involving in the consortium EU industrial developers, including leading-edge startups when possible. An open-source approach is encouraged when technically and economically feasible. Successful proposals are encouraged to utilise the resources offered by the AI factories¹⁷³, when relevant and in accordance with the specific access terms and conditions.

The proposals should adhere to the FAIR¹⁷⁴ data principles and apply GDPR¹⁷⁵ compliant processes for personal data protection based on good practices of the European research infrastructures, where relevant. The proposals should promote the highest standards of transparency and openness of models, as much as possible going well beyond documentation and extending to aspects such as assumptions, code and FAIR data management.

Proposals are encouraged to exploit potential synergies with the projects funded under the topic HORIZON-CL4-2021-HUMAN-01-24, as well as with other projects funded under Horizon Europe and Digital Europe Programmes. When the use cases are relevant to diseases covered by specific Horizon Europe Partnerships or missions (e.g., European Partnership on Rare Diseases, European Partnership on transforming health and care systems, the Cancer Mission, etc.), the proposals should adopt the federated data-management and data access recommendations already developed. Moreover, the applicants are encouraged to leverage available and emerging data infrastructures (e.g., European Health Data Space¹⁷⁶, European Genomic Data Infrastructure¹⁷⁷, Cancer Image Europe¹⁷⁸, European Open Science Cloud¹⁷⁹, EBRAINS¹⁸⁰ etc.), whenever relevant. Adopting EOSC recommendations and services for high-quality software is also encouraged. The expansion of health data and/or existing or under development AI infrastructures is not in the scope of this topic.

When possible, the developed models should be trained with multimodal data in different EU languages, to ensure accessibility and inclusivity.

Successful proposals are encouraged to utilise the resources offered by the AI factories¹⁸¹, when relevant and in accordance with the specific access terms and conditions.

This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts and institutions as well as the inclusion of

¹⁷³ <https://digital-strategy.ec.europa.eu/en/policies/ai-factories>

¹⁷⁴ See definition of FAIR data in the introduction to this work programme part.

¹⁷⁵ General Data Protection Regulation: https://commission.europa.eu/law/law-topic/data-protection_en
¹⁷⁶ https://health.ec.europa.eu/ehealth-digital-health-and-care/european-health-data-space_en

¹⁷⁷ <https://gdi.onemilliongenomes.eu>

¹⁷⁸ <https://cancerimage.eu>

¹⁷⁹ https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/open-science/european-open-science-cloud-eosc_en

¹⁸⁰ <https://www.ebrains.eu>

¹⁸¹ <https://digital-strategy.ec.europa.eu/en/policies/ai-factories>

relevant SSH expertise, to produce meaningful and significant effects enhancing the societal impact of the related research activities. The active engagement of healthcare professionals as end users, patients, and their caregivers is central to achieving targeted outcomes in the development and testing of the Generative AI virtual assistant solutions.

Proposals should consider the involvement of the European Commission's Joint Research Centre (JRC) based on its experience and with respect to the value it could bring in providing an effective interface between research activities and preliminary regulatory science as well as strategies and frameworks that address fit for regulatory requirements. In that respect, the JRC will consider collaborating with any successful proposal and this collaboration, when relevant, should be established after the proposal's approval.

All proposals selected for funding under this topic are strongly encouraged to collaborate, for example by participating in networking and joint activities, exchange of knowledge, developing and adopting best practices, as appropriate. Therefore, proposals are expected to include a budget covering the costs of any other potential joint activities without the prerequisite to detail concrete joint activities at this stage. The details of these joint activities will be defined during the grant agreement preparation phase.

Applicants envisaging to include clinical studies¹⁸² should provide details of their clinical studies in the dedicated annex using the template provided in the submission system.

¹⁸² Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

Destination - Developing and using new tools, technologies and digital solutions for a healthy society

Topics under this destination are directed towards the Key Strategic Orientation 2 “*The Digital Transition*” and Key Strategic Orientation 3 “*A More Resilient, Competitive, Inclusive, and Democratic Europe*” of Horizon Europe’s strategic plan 2025-2027.

Research and Innovation supported under this destination should contribute to the following expected impact, set out in the strategic plan impact summary for the Health Cluster: “*Health technologies, data, new tools, and digital solutions are applied effectively thanks to their inclusive, ethically sound, secure and sustainable delivery, integration and deployment in health policies and in health and care systems.*”

The Health Cluster will continue work to develop and stimulate the uptake of new technologies and digital solutions to improve healthcare and health systems. This includes using technology to help people better understand and use health information, promote healthier lifestyles, improve pandemic/epidemic preparedness, prevent diseases, provide better diagnoses and more personalised treatments and care solutions, and improve access to health and care systems while making sure that even groups with limited access to good healthcare can benefit. The Cluster will help the EU ensure leadership in breakthrough health and medical technologies and achieve open strategic autonomy in essential medical supplies and digital innovations. By collecting and analysing health data across borders and creating human-centred health technologies, including the use of Artificial Intelligence (AI), research can improve and personalise medical care for different patients, increasing patient safety and leading to better health outcomes and wellbeing.

Support for Research and Innovation is needed on the large spectrum of tools and technologies for biomedical research, prevention, diagnosis, therapy and health monitoring. This includes enabling technologies not least innovative biotechnological approaches. The emergence of the European Health Data Space will create an additional boost to cross-border, data-driven approaches and innovation, e.g. for personalised medicine or patient safety. High-quality health data (incl. real world data) combined with digital technologies, modelling and AI tools, have a high potential for advancing biomedical Research and Innovation. Emerging and disruptive technologies using tools like new genomic techniques and AI tools, offer big opportunities for transforming healthcare, but also depend on the capacity to collect, integrate and interpret large amounts of data and on their compatibility with appropriate regulatory frameworks. Such technologies can provide better and more cost-efficient solutions with high societal impact, tailored to the specific healthcare needs of the individual. However, novel tools, technologies and digital approaches face specific barriers and hurdles in piloting, implementing and scaling-up before reaching the patient, encountering additional challenges such as public acceptance and trust. The development and uptake of new technologies for high-quality healthcare will need to draw on multiple disciplines and require cross-sectoral cooperation among all those concerned, including end-users (patients, healthcare providers and workforce, researchers, regulatory bodies, policymakers, and funders). These interactions will help address unmet needs via integrated tools, hybrid health technologies and digital

solutions (including those with limited commercial interest). It will also support the design and development of health products and services tailored to the needs of specific population groups, thereby improving patient outcomes and reducing health inequalities.

This destination aims to promote the development of novel tools, technologies and digital solutions for prevention, diagnosis and therapy with the goal to improve health outcomes, while taking into consideration the rights of the individual, safety, effectiveness, appropriateness, accessibility, comparative value-added and fiscal sustainability as well as issues of ethical, legal and regulatory nature.

In this work programme part, Destination “*Developing and using new tools, technologies and digital solutions for a healthy society*” is driven by two key Commission policies, the “Biotechnology and Biomanufacturing Strategy”¹⁸³ and the “Artificial Intelligence Strategy”¹⁸⁴ and will focus on the development and use of innovative biotechnological tools for the improvement of the therapeutic arsenal of healthcare against diseases where there are currently no or only insufficient therapeutic strategies, on the development of Generative Artificial Intelligence models to help researchers in their activities to deliver new knowledge for advancing biomedical research and on the technology transfer of biotechnology-derived therapeutics from discovery to approved products. In particular, the topics under this destination will support activities aiming at: cellular and cell-free therapeutic approaches employing either genetic modifications or more classical techniques for improving the safety and therapeutic performance of these therapies, including their testing in clinical studies; development of generative AI models based on large-scale multi-modal health data for better understanding of diseases and their management thanks to the enhancement of biomedical discoveries and more personalised treatment solutions; bridging the gap between pre-clinical and clinical development stages of therapeutics developed through biotechnological methods and giving special emphasis on small and medium-sized enterprises (SMEs). In this context, specific attention is given to support the objectives of the Strategic Technologies for Europe Platform (STEP), adopted by the Commission in March 2024, which aims to boost investments in critical technologies in Europe (see introduction to this work programme part).

Under this destination, actions will support interdisciplinary Research and Innovation activities involving a broad spectrum of actors from different sectors, who will strive for the convergence of health technologies, combining medical technologies, pharmaceuticals, Advanced Therapy Medicinal Products (ATMPs) and digital health technologies, that will lead to integrated health solutions for the benefit of healthcare providers and patients.

In view of increasing the impact of EU investments under Horizon Europe, the European Commission welcomes and supports cooperation between EU-funded projects to enable cross-fertilisation and other synergies. This could range from networking to joint activities

¹⁸³ Commission Communication on Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU; COM(2024) 137 final: https://research-and-innovation.ec.europa.eu/document/download/47554adc-dffc-411b-8cd6-b52417514cb3_en

¹⁸⁴ Commission Communication on Artificial Intelligence for Europe; COM(2018) 237 final: <https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence>; <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2018:237:FIN>

such as the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. Opportunities for such activities and potential synergies exist between projects funded under the same topic but also between other projects funded under another topic, Cluster or pillar of Horizon Europe (but also with ongoing projects funded under Horizon 2020). In particular, this could involve projects related to European health research infrastructures (under pillar I of Horizon Europe), the EIC strategic challenges on health, the European Innovation Ecosystems (EIE) interregional networks on health and EIT-KIC Health (under pillar III of Horizon Europe) or in areas cutting across the health and other Clusters (under pillar II of Horizon Europe), like, for instance, with Cluster 4 “Digital, Industry and Space” on digitalisation of the health sector or key enabling technologies.

Expected Impacts:

Proposals for topics under this destination should set out a credible pathway towards the development and use of new tools, technologies and digital solutions for a healthy society, and more specifically to one or several of the following impacts:

- Europe’s scientific and technological expertise and know-how, its capabilities for innovation in new tools, technologies and digital solutions, and its ability to take-up, scale-up and integrate innovation in healthcare is world-class.
- Citizens benefit from targeted and faster research resulting in safer, more sustainable, efficient, cost-effective and affordable tools, technologies and digital solutions for improved (personalised) disease prevention, diagnosis, treatment and monitoring for better patient outcome and wellbeing, in particular through increasingly shared health resources (interoperable data, infrastructure, expertise, citizen/patient driven co-creation)¹⁸⁵.
- The EU gains high visibility and leadership in terms of health technology development, including through international cooperation.
- The burden of diseases in the EU and worldwide is reduced through the development and integration of innovative diagnostic and therapeutic approaches, personalised medicine approaches, digital and other people-centred solutions for healthcare.
- Both the productivity of health Research and Innovation, and the quality and outcome of healthcare is improved thanks to the use of health data and innovative analytical tools, such as artificial intelligence (AI) supported decision-making, in a secure and ethical manner, respecting individual integrity and underpinned with public acceptance and trust.
- Citizens trust and support the opportunities offered by innovative technologies for healthcare, based on expected health outcomes and potential risks involved.

¹⁸⁵ Commission Communication on the digital transformation of health and care; COM(2018) 233 final

The protection of European communication networks has been identified as an important security interest of the Union and its Member States. Entities that are assessed as high-risk suppliers¹⁸⁶ of mobile network communication equipment (and any entities they own or control) are not eligible to participate as beneficiaries, affiliated entities and associated partners to topics identified as “subject to restrictions for the protection of European communication networks”. Please refer to the Annex B of the General Annexes of this Work Programme for further details.

Proposals are invited against the following topic(s):

HORIZON-HLTH-2025-01-TOOL-01: Enhancing cell therapies with genomic techniques

Call: Cluster 1 - Health (Single stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 8.00 and 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 50.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health’s programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions

¹⁸⁶ Entities assessed as “high-risk suppliers”, are currently set out in the second report on Member States’ progress in implementing the EU toolbox on 5G cybersecurity of 2023 (NIS Cooperation Group, Second report on Member States’ progress in implementing the EU Toolbox on 5G Cybersecurity, June 2023) and the related Communication on the implementation of the 5G cybersecurity toolbox of 2023 (Communication from the Commission: Implementation of the 5G cybersecurity Toolbox, Brussels, 15.6.2023 C(2023) 4049 final).

	<p>apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>In order to ensure a balanced project portfolio with regard to the therapeutic area targeted¹⁸⁷, grants will be awarded (within available budget) to proposals not only in order of ranking but also in function of the highest ranked proposals in different therapeutic areas, provided that the applications attain all thresholds available.</p>

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Developing and using new tools, technologies and digital solutions for a healthy society”. To that end, proposals under this topic should aim to deliver results directed towards and contributing to several of the following expected outcomes:

- Biomedical scientists dispose of tools that allow them to engineer cells with specific therapeutic features.
- Improved methods and assays are available for biopharmaceutical developers.
- Clinicians will get access to innovative therapeutic approaches enabling them to treat conditions, where there are currently no or only insufficient therapeutic strategies.
- Cell engineering will be enriched and pave the way for novel personalised therapy options.

Scope: Therapies based on cells, stem cells or somatic cells, have been shown to be highly effective as therapeutics for a variety of health conditions. However, bottlenecks remain which currently hamper their safe and efficient application on a large scale. Genome- and epigenome editing have great potential to overcome some of these bottlenecks and to lead to the next-generation of cell-based therapies. Advancing the frontier of cell-based therapy with these tools and further translation of such research into clinically viable solutions may open up a new era of innovative therapies.

This topic aims at the design of engineered cells to address the current limitations of cellular therapies, such as delivery efficiency, patient safety, in vivo persistence, desired therapeutic effect, immune tolerance and manufacturing workflows. The chosen approach should enable to control the characteristics, fate and function of the engineered cells from gene level onwards and thus lead to customised cells with improved therapeutic features.

¹⁸⁷ Therapeutic area i to xi, as given in the scope of this topic.

The use of genetic engineering and in particular gene editing tools should be a key element in the design of the engineered cells. The therapeutic action should be based on the endogenous capabilities of the cells; the exogenous loading of cells with drugs (using the cells as drug carrier) is not in scope.

The engineered cells should be derived from human cells. Either stem cells or somatic cells may be used, but of allogeneic origin, thereby opening up the development of “off-the-shelf” cell therapeutics.

Applicants should explicitly state in their proposal which of the following therapeutic areas is targeted and the proposed work should address only this specific therapeutic area:

- i. Cancer and oncology
- ii. Nervous and sensory system
- iii. Cardiovascular and circulatory system
- iv. Endocrinology and metabolic system
- v. Musculoskeletal system
- vi. Digestive system
- vii. Infectious diseases
- viii. Respiratory system
- ix. Dermatology
- x. Immune system and auto-immune diseases
- xi. Other

The activities should comprise all the following elements:

- Engineering of synthetic genetic circuits acting as switches to modulate the desired function(s) and their integration in the chosen cells, with the help of new genomic techniques. Next to new genomic techniques like genome and epigenome editing, also synthetic biology introducing transgenes or artificial genes may be used to endow the engineered cells with improved therapeutic properties and achieve the desired cell phenotype. The applicants should use gene control systems, including transcriptional, translational and/or post-translational control, or other approaches which install on-off switches and control systems, like e.g. a “sense-and-respond” mechanism in the engineered cells, sometimes also referred to as “theranostic cells”.
- For the efficient construction and acceleration of the design-build-test cycles of the engineered cells containing the programmed functionalities state of the art tools including digital ones (e.g. Computer-Aided Design - CAD - and similar tools) should be used.

- Suitable *in-vitro* and *ex-vivo* systems should be used for testing and demonstration of function and performance of the engineered cells. Their added value, safety and efficacy should be ensured in appropriate pre-clinical models for one specific therapeutic area. Any disease, dysfunction or health impairment may be selected as therapeutic area.
- Applicants should show that the engineered cells are safe and exert the desired therapeutic effect *in-vivo*. Engagement and interaction with regulatory authorities during the project is essential for qualification of the developed cell-based therapy and in view of the conduct of clinical studies. The demonstration of the feasibility of the proposed cell-based therapy in first in-human studies would be an asset.

Sex differences should be taken into consideration, both with regard to the parent cells and for the targeted therapeutic application. Collaboration with relevant European research infrastructures and findings from EU-supported research projects should be considered. Participation of small and medium-sized enterprises (SMEs) is strongly encouraged.

Proposals should consider the involvement of the European Commission's Joint Research Centre (JRC) as a potential interface between research activities and pre-normative regulatory science and in relation to the potential validation of test methods fit for regulatory purpose. In that respect, the JRC will consider collaborating with any successful proposal and this collaboration, when relevant, should be established after the proposal's approval.

Applicants should provide details of their clinical studies¹⁸⁸ in the dedicated annex using the template provided in the submission system. As proposals under this topic are expected to include clinical studies, the use of the template is strongly encouraged.

HORIZON-HLTH-2025-01-TOOL-02: Advancing cell secretome-based therapies

Call: Cluster 1 - Health (Single stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 9.00 and 13.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: In recognition of the opening of the US National Institutes of Health's

¹⁸⁸ Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

	<p>programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Developing and using new tools, technologies and digital solutions for a healthy society”. To that end, proposals under this topic should aim to deliver results directed towards and contributing to several of the following expected outcomes:

- Researchers and biopharmaceutical developers work together with clinicians striving to translate innovative therapeutic approaches into healthcare solutions.
- Producers of innovative health technologies use standardised manufacturing processes.
- Healthcare providers get access to a new type of innovative therapies with demonstrated health benefits as compared to traditional treatments.
- Patients benefit from innovative therapies for conditions for which there are currently no or only insufficient therapeutic strategies.
- Health systems ultimately benefit from improved patient outcomes, superior to the current standard of care.

Scope: Secretome-based therapies have emerged as a promising alternative to cell-based therapies. The secretome of cells is defined as the repertoire of molecules and biological factors that are secreted into the extracellular space and has been shown to be a key factor for therapeutic activity due to its paracrine effects. The potential to manufacture, store and use secretome factors as off-the-shelf products, while maintaining the therapeutic benefits of cells but with fewer safety concerns, has placed the secretome at the forefront of regenerative medicine. Different cell secretomes or parts thereof have been the subject of clinical trials, but there is currently no regulatory-approved secretome-based therapy owing to several challenges. Currently, for the majority of secretome-based therapies, the main bottlenecks are: the incomplete understanding of their mode of action, their reproducibility due to a lack of standardised manufacturing processes and a lack of potency- and quality assurance assays.

Additional limitations are the characterisation of the bioactive factors and the optimisation of the delivery strategies.

Proposals submitted under this topic should tackle the above-mentioned issues and pave the way to secretome-based therapies that are safe, efficacious, and regulatory-approved for human use. The activities should cover secretomes or their parts that are derived from human cells and comprise all the following elements:

- The selection of a secretome-based therapy whose main mechanism of action has been elucidated in in-vitro and/or in-vivo models prior to the start of the proposed work. The selected secretome or its chosen bio-active components (extracellular vesicles, trophic factors, organelles, RNA, proteins, peptides, etc.), including those that are potentially harmful, should have been characterised and its/their therapeutic activity should already have been demonstrated in relevant pre-clinical models. All types of human cells may be used as underlying parent cells.
- All activities that are necessary to ensure regulatory and ethical approvals enabling the conduct of the clinical study. This may comprise the full characterisation, standardised analytical methods, further pre-clinical studies in relevant models (pertinent to the targeted disease or disorder) and appropriate quality assurance assays including computational approaches, organoids and organ-on chips/microfluidic systems.
- Establishment of a manufacturing protocol for the selected secretome or its components, including all the steps of the biogenesis: parent cells selection, their pre-conditioning and bio-processing (isolation, expansion, cultivation in bioreactors), processing of the conditioned media, the extraction of the secretome or its components (isolation, purification, storage, distribution) and its/their delivery to target site in the human body (mode of administration, final formulation).
- Definition of relevant quality criteria for and establishment of a fully GMP-conform¹⁸⁹ production process that enables to carry out clinical trials of the proposed secretome-based therapy.
- Carrying out of all the above-mentioned activities in close interaction with and in compliance with all requirements of the relevant competent authorities, allowing to perform clinical trials.
- Conduct of an interventional randomised controlled clinical trial comprising phase 1 and phase 2 to generate scientific evidence demonstrating safety and efficacy of the proposed secretome-based therapy.
- Applicants are expected to deliver no later than at month 12 of the project the documentation needed for the GMP-conform production (e.g. SOP - Standard Operating Procedures) and no later than at month 24 the documentation needed for the conduct of

¹⁸⁹ Good Manufacturing Practice (GMP): <https://www.who.int/teams/health-product-policy-and-standards/standards-and-specifications/gmp>

the clinical trial (e.g. IMPD¹⁹⁰), enabling to get the regulatory approval for the clinical trial. The overall goal is to perform and finalise the phase 1 and phase 2 clinical trials during the lifetime of the project and further achieve authorization of the proposed secretome-based therapy.

- Optionally and if essential for the chosen secretome-based therapy, the work should also include an engineering step of the secretome to achieve the desired profile for increased safety and improved therapeutic effect. To this end, the secretome or its bioactive component(s) may be modified either pre- or post-biogenesis, by use of classical methods on the parent cells, except their genetic modification, or by physico-chemical modification of the bio-active secretome component. The effected modifications of the secretome should lead to the improvement of the functional properties/features and/or of the delivery to target site (organ, tissue, etc.) for the bioactive secretome component. All these modifications should not alter the main mechanism of action and retain the proposed secretome-based therapy within the boundaries of substances of human origin¹⁹¹. The therapeutic effect of the secretome or its components should come from its/their endogenous capabilities and functionalities; exogenous loading with drugs (using the secretome or its components as drug carrier), be it pre- or post-biogenesis, is not in scope.

All types of diseases, dysfunctions or health impairments may be targeted, preference should be given to conditions that affect larger patient populations¹⁹² and/or represent a high burden on public health systems.

Sex differences should be taken into consideration, both with regard to the parent cells and for the targeted therapeutic application. Participation of small and medium-sized enterprises (SMEs) is strongly encouraged and if an exploitation strategy is developed, it should commit to a first deployment in the EU.

Proposals should consider the involvement of the European Commission's Joint Research Centre (JRC) as a potential interface between research activities and pre-normative regulatory science and in relation to the potential validation of test methods fit for regulatory purpose. In that respect, the JRC will consider collaborating with any successful proposal and this collaboration, when relevant, should be established after the proposal's approval.

Applicants should provide details of their clinical studies¹⁹³ in the dedicated annex using the template provided in the submission system. As proposals under this topic are expected to include clinical studies, the use of the template is strongly encouraged.

¹⁹⁰ Investigational Medicinal Product Dossier - European Medicines Agency: <https://www.ema.europa.eu/en/requirements-quality-documentation-concerning-biological-investigational-medicinal-products-clinical-trials-scientific-guideline>

¹⁹¹ Blood, tissues, cells and organs - European Commission (europa.eu): https://health.ec.europa.eu/blood-tissues-cells-and-organs_en

¹⁹² Diseases with a high frequency (e.g.: incidence or prevalence) or high DALY (Disability-Adjusted Life Years)

HORIZON-HLTH-2025-01-TOOL-03: Leveraging multimodal data to advance Generative Artificial Intelligence applicability in biomedical research (GenAI4EU)

Call: Cluster 1 - Health (Single stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 15.00 and 17.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 50.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health's programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination "Developing and using new tools, technologies and digital solutions for a healthy society". To that end, proposals under this topic should aim to deliver results directed towards and contributing to all the following expected outcomes:

¹⁹³ Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

- Researchers, including clinical researchers, have access to robust, trustworthy and ethical Generative Artificial Intelligence (AI)¹⁹⁴ models able to effectively advance biomedical research towards predictive and personalised medicine.
- Researchers, including clinical researchers, know how to use Generative AI models to synthesise the available scientific information and large-scale multimodal data and how to apply the necessary precautions, in order to deliver new knowledge and breakthrough scientific discoveries.
- Research community benefits from advanced methodologies to assess the validity and application of accurate, transparent, traceable, and explainable Generative AI models.

Scope: The availability of large-scale multimodal health data, scientific information, and novel Generative AI models, combined with high-performance computing capacities offer an unprecedented opportunity for researchers to achieve breakthroughs in our understanding of disease development and to develop new predictive models for disease management, personalised treatment solutions and personalised care pathways. The European Commission recognises this potential and considers health research and healthcare, among the priority sectors for building the Union's strategic leadership [COM(2024) 28 final].

This topic will contribute to advancing research and providing new evidence on how these models contribute to and support biomedical research and its applicability towards more predictive and personalised medicine, while also defining use conditions, usability requirements and training needs of the researchers. It aims to cover existing gaps related to Generative AI in biomedical research, addressing both capabilities and existing limitations.

Research actions under this topic should include all the following activities, ensuring multidisciplinary approaches and a broad representation of stakeholders in the consortia (e.g. industry, academia, healthcare professionals):

- Develop new or re-purpose existing Generative AI models for biomedical research across various medical fields and/or therapeutic indications. The models should be robust, based on the use of large-scale, complex, and multimodal high-quality data (real and/or synthetic data), such as but not limited to medical imaging, genomics, proteomics, other molecular data, electronic health records, laboratory results, unstructured health data and/or available scientific and public information relevant to biomedical research. The applicants may choose any type of available large-scale biomedical data and/or their combinations and justify their relevance for training and optimisation of the Generative AI tools.
- Develop a proof of concept with at least two use cases relevant for predictive and personalised medicine in different medical fields to demonstrate the scientific added value compared to currently used methods and/or potential future clinical utility of the

¹⁹⁴ Generative AI is a type of AI technology that can generate various forms of new content such as text, images, sounds, and even code, such as for programming or gene sequencing (<https://ec.europa.eu/newsroom/dae/redirection/document/101621>).

Generative AI models in biomedical research. The applicants should actively engage potential end users in the development, adaptation and testing of the new/repurposed models, considering sustainability aspects.

- Develop or revise existing methodologies to assess alignment with human values and the use cases of developed and/or repurposed Generative AI models, their applicability, performance, limitations and added value in biomedical research. These methodologies should demonstrate the technical, scientific, and potential future clinical utility, robustness and trustworthiness of the developed or repurposed Generative AI models, in particular:
 - o Appropriate performance metrics for continuous evaluation and testing of scientific, technical robustness and relevance of the Generative AI models, as well as risks from misalignment of training data (which may degrade performance, e.g. through including but not limited to hallucinations or confabulations of these models).
 - o Appropriate metrics for model intelligibility, robustness, alignment with ethical principles and approaches for ethical evaluation of AI trustworthiness¹⁹⁵.
 - o Appropriate solutions to identify and mitigate potential bias and confounding¹⁹⁶ of Generative AI models and include examples from different perspectives (e.g., representativeness of the data, bias of the trainer, bias of training and validation data, algorithmic discrimination and bias including gender bias etc.).
 - o Methods to systematically address and assess ELSI (Ethical, Legal, and Societal Implications) aspects, including data privacy, risk of discrimination/bias (not limited to sex, gender, age, disability, race or ethnicity, religion, belief, minority and/or vulnerable groups).
 - o Appropriate techniques to ensure explainability of the model in order to increase users' trust.
 - o Approaches and metrics (where feasible) for the usability of Generative AI models for researchers.

All proposals should demonstrate EU added value by developing and/or using trustworthy and ethical Generative AI models developed in the EU and Associated countries, involving in the consortium EU industrial developers of Generative AI solutions, including leading-edge startups when possible. An open-source approach is encouraged when technically and economically feasible.

¹⁹⁵ Ethics Guidelines for Trustworthy AI, published by the European Commission's High Level Expert Group on Artificial Intelligence: <https://ec.europa.eu/futurium/en/ai-alliance-consultation.1.html>

¹⁹⁶ Guidelines on the responsible use of Generative AI in research developed by the European Research Area Forum: https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/guidelines-responsible-use-generative-ai-research-developed-european-research-area-forum-2024-03-20_en

The proposals should adhere to the FAIR¹⁹⁷ data principles and apply GDPR¹⁹⁸ compliant processes for personal data protection based on good practices developed by the European research infrastructures, where relevant. The proposals should promote the highest standards of transparency and openness of models, as much as possible going well beyond documentation and extending to aspects such as assumptions, code and FAIR data management.

Proposals are encouraged to exploit potential synergies with other relevant projects funded under Horizon Europe and/or Digital Europe Programmes. When the use cases are relevant to diseases covered by specific Horizon Europe Partnerships or missions (e.g., the European Partnership on Rare Diseases, the Cancer Mission, etc.), the proposals should leverage the knowledge/data platforms already developed, such as the Virtual Platform of the European Joint Programme of Rare Diseases¹⁹⁹ etc. Moreover, the applicants are encouraged to leverage available and emerging European data infrastructures (e.g., the European Health Data Space²⁰⁰, European Genomic Data Infrastructure²⁰¹, Cancer Image Europe²⁰², European Open Science Cloud²⁰³, EBRAINS²⁰⁴ etc.), whenever relevant. In addition, adopting EOSC recommendations and services for high-quality software is also encouraged, if applicable. The creation and expansion of health data and/or AI infrastructures or large-data curation initiatives, existing or under development, are not in the scope of this topic.

This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts and institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Successful proposals are encouraged to utilise the resources offered by the AI factories²⁰⁵, when relevant and in accordance with the specific access terms and conditions.

Proposals should consider the involvement of the European Commission's Joint Research Centre (JRC) with respect to the value it could bring in providing an effective interface between research activities and pre-normative regulatory science as well as strategies and frameworks that address regulatory requirements. In that respect, the JRC will consider collaborating with any successful proposal and this collaboration, when relevant, should be established after the proposal's approval.

All proposals selected for funding under this topic are strongly encouraged to collaborate, for example by participating in networking and joint activities, exchange of knowledge,

¹⁹⁷ See definition of FAIR data in the introduction to this work programme part.

¹⁹⁸ General Data Protection Regulation: https://commission.europa.eu/law/law-topic/data-protection_en

¹⁹⁹ <https://www.ejprarediseases.org/what-is-the-virtual-platform>

²⁰⁰ https://health.ec.europa.eu/ehealth-digital-health-and-care/european-health-data-space_en

²⁰¹ <https://gdi.onemilliongenomes.eu>

²⁰² <https://cancerimage.eu>

²⁰³ https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/open-science/european-open-science-cloud-eosc_en

²⁰⁴ <https://www.ebrains.eu>

²⁰⁵ <https://digital-strategy.ec.europa.eu/en/policies/ai-factories>

developing, and adopting best practices, as appropriate. Therefore, proposals are expected to include a budget for the attendance to regular joint meetings and may consider covering the costs of any other potential joint activities without the prerequisite to detail concrete joint activities at this stage. The details of these joint activities will be defined during the grant agreement preparation phase.

Applicants envisaging to include clinical studies²⁰⁶ should provide details of their clinical studies in the dedicated annex using the template provided in the submission system.

HORIZON-HLTH-2025-01-TOOL-05: Boosting the translation of biotech research into innovative health therapies

Call: Cluster 1 - Health (Single stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 80.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to prove that the investigational product is ready for clinical testing, proposals must provide evidence of regulatory approval in the EU already in place for phase I clinical study.</p> <p>The proposed EU contribution going to small and medium-sized enterprises (SMEs) must be 50% or more of the total EU contribution to the project as a whole.</p> <p>In addition to the eligibility conditions as described in General Annex B, the consortium must be composed of at most 5 legal entities as beneficiaries.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply:

²⁰⁶ Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

	The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: Eligible proposals submitted under this topic and exceeding all the evaluation thresholds will be awarded a STEP Seal ²⁰⁷ .

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Developing and using new tools, technologies and digital solutions for a healthy society”. To that end, proposals under this topic should aim to deliver results directed towards and contributing to all the following expected outcomes:

- Healthcare providers, researchers and patients get faster access to innovative therapies.
- The European Union benefits from more clinical trials being conducted with new biotech therapeutic approaches.
- The competitiveness of small and medium-sized enterprises (SMEs) from the EU and Associated Countries within the health biotech sector is strengthened.

Scope: The Commission Communication *'Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU'* ²⁰⁸ has recently identified research and technology transfer to the market as a major challenge for the biotechnology sector. This topic aims to speed up the development of innovative biotechnology-based therapies by supporting the initial phases of clinical research. SMEs play a key role in the EU's potential to innovate, with most biotechnology-derived drugs in development being progressed by SMEs and small biotech companies. However, transitioning from drug discovery and development stages to approved products requires substantial investment and sufficient resources in different areas (e.g., manufacturing, clinical trial management, regulatory affairs, etc.), with the time needed for clinical development often exceeding 10 years ²⁰⁹. This topic targets collaborative multidisciplinary consortia of SMEs, academics, clinicians and research organisations bringing together the necessary expertise to launch the clinical development of novel biotechnology-derived therapeutics. Collaboration with the relevant European research infrastructures is encouraged. This topic does not address the full clinical development needed to bring products to market but aims to support the critical transition phase from preclinical to clinical development by supporting the early clinical phases. A non-exhaustive list of biotechnology-derived therapies in scope include monoclonal antibodies, (therapeutic) vaccines, recombinant biomolecules, Advanced Therapy Medicinal Products (ATMPs), nano-

²⁰⁷ https://strategic-technologies.europa.eu/about/step-seal_en

²⁰⁸ https://research-and-innovation.ec.europa.eu/document/download/47554adc-dffc-411b-8cd6-b52417514cb3_en

²⁰⁹ https://go.bio.org/rs/490-EHZ-999/images/ClinicalDevelopmentSuccessRates2011_2020.pdf

based drugs, RNA therapies etc. Whole blood, blood components and other substances of human origin are not within the scope of this topic.

Proposals submitted under this topic should include all the following elements:

- A Clinical study either phase I, II or I/II depending on the appropriate stage of development.
- The proposal should convincingly demonstrate a significant economic potential of the final product(s) for the Single Market.
- A clearly defined exploitation plan, with a detailed proposed route to commercialisation, description of the intellectual property ownership and benefit for the SME(s). The plan should include an anti-shelving strategy, commercial forecasts for the product sales & revenue, and strategies for follow-up financing as well as market authorisation. The exploitation strategy should envisage a first deployment in the EU.
- Justification of the patient populations that will benefit directly from the development of the therapies. Clinical indications where potentially large patient populations could benefit will be favoured.

The maximum project duration should not exceed four years.

Applicants should provide details of their clinical studies²¹⁰ in the dedicated annex using the template provided in the submission system. As proposals under this topic are expected to include clinical studies, the use of the template is strongly encouraged.

²¹⁰ Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

Destination - Maintaining an innovative, sustainable, and competitive EU health industry

Topics under this destination are directed towards the Key Strategic Orientation 3 “*A more resilient, competitive, inclusive, and democratic Europe*” of Horizon Europe’s strategic plan 2025-2027. In addition, Key Strategic Orientation 2 “*The Digital Transition*” and Key Strategic Orientation 1 “*The Green Transition*” are supported.

Research and Innovation supported under this destination should contribute to the following expected impact, set out in the strategic plan impact summary for the Health Cluster: “*the EU health industry is innovative, sustainable, and globally competitive thanks to improved uptake of breakthrough technologies and innovations (including social innovations) that make the EU with its Member States and Associated Countries more resilient and less reliant on imports of critical health technologies*”.

The health industry is a key driver for growth and has the capacity to provide health technologies to the benefit of patients and providers of healthcare services. The relevant value chains involve a broad variety of key players from supply, demand and regulatory sides. In addition, the path of innovation in health is long and complex. The development of novel health technologies is generally associated with uncertainties and market barriers due to expensive and risky development (e.g., high attrition rate in pharmaceutical development), high quality and security requirements (e.g., clinical performance, safety, data privacy and cybersecurity) and market specificities (e.g., strong regulation, pricing and reimbursement issues). In addition, the growing concern about environmental issues is putting more pressure on this industry. Therefore, there is a need for Research and Innovation integrating various stakeholders to facilitate market access of innovative health technologies (medical technologies, pharmaceuticals, biotechnologies, digital health technologies).

In this work programme part, Destination “*Maintaining an innovative, sustainable and competitive EU health industry*” focuses on collaborative efforts to advance manufacturing processes and activities to ensure increased knowledge on and a faster uptake of medical devices and *in vitro* diagnostic medical devices in the current EU regulatory context. The results will support the EU Industrial Policy, with a focus on strengthening the resilience of the single market, addressing the EU’s strategic dependencies, gaining technological sovereignty and accelerating the green and digital transitions. In addition, the results will further strengthen the single market, by implementing the Digital Single Market strategy, providing evidence and guidelines for stakeholders and regulators to ensure take-up of innovations, supporting environmental, fiscal and socio-economic sustainability while fostering healthcare access and reducing health inequities. The results will also support the implementation of the Regulations on Medical Devices (MDR) and *In Vitro* Medical Devices (IVDR) and the Pharmaceutical Strategy for Europe, especially aspects related to the importance of ensuring industry competitiveness, innovation and sustainability and the development of high quality, safe, effective, and greener medicines.

In view of increasing the impact of EU investments under Horizon Europe, the European Commission welcomes and supports cooperation between EU-funded projects to enable

cross-fertilisation and other synergies. This could range from networking to joint activities such as the participation in joint workshops, the exchange of knowledge, development and adoption of best practices, or joint communication activities. All topics are open to international collaboration to address global environment and health challenges.

In particular, the topics under this destination will support activities aiming at: i) optimising the manufacturing of Advanced Therapy Medicinal Products (ATMPs) with the ultimate aim that healthcare providers, researchers and patients get faster access to ATMPs with demonstrated health benefits for unmet medical needs; ii) advance digitalisation of conformity assessment procedures in the context of medical device and *in vitro* diagnostic medical device development; iii) facilitating and enabling improved knowledge on the conduct of multinational clinical studies of orphan devices and/or highly innovative (“breakthrough”) devices.

Expected impacts:

Proposals for topics under this destination should set out a credible pathway to contributing to maintaining an innovative, sustainable and competitive EU health industry, and more specifically to one or several of the following expected impacts:

- Health industry in Europe and Associated Countries is more competitive and sustainable, assuring European leadership in breakthrough health technologies and open strategic autonomy in essential medical supplies and (digital) technologies, contributing to job creation and economic growth, in particular with small and medium-sized enterprises (SMEs).
- Health industry is supported by cross-sectoral Research and Innovation in the context of convergence of health technologies (integrating medical technologies, pharmaceuticals, biotechnologies, digital health, and e-health technologies) while strengthening key market positions.
- Health industry is working more efficiently along the value chain from the identification of needs to the scale-up and take-up of solutions at national, regional or local level, including through early engagement with patients, healthcare providers, health authorities and regulators ensuring suitability and acceptance of solutions.
- Citizens, healthcare providers and health systems benefit from a swift uptake of innovative health technologies and services through the provision of evidence and guidelines for stakeholders, policymakers and regulators. These efforts offer significant improvements in health outcomes, also potentially strengthening access to healthcare for all and reducing health inequities while health industry benefits from decreased time-to-market.
- Citizens, healthcare providers and health systems benefit from increased health security in Europe and Associated Countries due to reliable access to key manufacturing

capacity, including timely provision of essential medical supplies and technologies of particularly complex or critical supply and distribution chains.

Legal entities established in China are not eligible to participate in Innovation Actions in any capacity. Please refer to the Annex B of the General Annexes of this Work Programme for further details.

The protection of European communication networks has been identified as an important security interest of the Union and its Member States. Entities that are assessed as high-risk suppliers²¹¹ of mobile network communication equipment (and any entities they own or control) are not eligible to participate as beneficiaries, affiliated entities and associated partners to topics identified as “subject to restrictions for the protection of European communication networks”. Please refer to the Annex B of the General Annexes of this Work Programme for further details.

Proposals are invited against the following topic(s):

HORIZON-HLTH-2025-01-IND-01: Optimising the manufacturing of Advanced Therapy Medicinal Products (ATMPs)

Call: Cluster 1 - Health (Single stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health’s programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation</p>

²¹¹ Entities assessed as “high-risk suppliers”, are currently set out in the second report on Member States’ progress in implementing the EU toolbox on 5G cybersecurity of 2023 (NIS Cooperation Group, Second report on Member States’ progress in implementing the EU Toolbox on 5G Cybersecurity, June 2023) and the related Communication on the implementation of the 5G cybersecurity toolbox of 2023 (Communication from the Commission: Implementation of the 5G cybersecurity Toolbox, Brussels, 15.6.2023 C(2023) 4049 final).

	and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ²¹² .

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Maintaining an innovative, sustainable, and competitive EU health industry”. To that end, proposals under this topic should aim to deliver results that are directed, tailored towards and contributing to most of the following expected outcomes:

- Academic and industrial developers advance processes that support the timely and robust development of Advanced Therapy Medicinal Products (ATMPs);
- Manufacturers integrate improved technologies/processes (including Artificial Intelligence solutions), analytic tools, methods including non-clinical methods and assays for more flexible manufacturing of ATMPs;
- Healthcare providers, researchers and patients get faster access to ATMPs with demonstrated health benefits for unmet medical needs;
- Companies in the EU and Associated countries get a better market position in the field of ATMP manufacturing and improve their knowledge on how to advance process improvements;

²¹² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- The EU and Associated countries lay the foundations for academic centres of excellence²¹³ in ATMPs.

Scope: New pioneering treatments called Advanced Therapy Medicinal Products (ATMPs)²¹⁴, including cell and gene therapies, are at the cutting edge of medicines discovery. Owing to their precise nature, ATMPs embody personalised medicine and reflect a shift in medicine towards potentially one-time curative therapies instead of chronic therapies that mainly cure the symptoms but not the underlying cause of diseases.

ATMPs have undergone important technological advancements that are improving their efficacy, precision, scalability, and safety. Additionally, the disease focus of ATMPs is likely to shift further from rare diseases to more common conditions with larger patient populations. However, the development and manufacturing of ATMPs still faces important challenges, such as long development times, expensive manufacturing processes and a fragmented and dispersed biomanufacturing landscape.

The topic focuses on addressing the challenges of ATMP manufacturing, the need for highly specialised equipment and facilities, including in-process quality control and validation tests, scaling up and batch-to-batch reproducibility, whilst maintaining the efficacy of an ATMP product during the manufacturing process and/or the transition from centralised to decentralised manufacturing.

This topic aims to optimise the ATMP production where the general manufacturing process for a given medicinal product has already been established but has not been sufficiently optimised for its scale-up. Collaboration is crucial to refine the manufacturing of ATMPs, emphasising advancements in processes - including leveraging the potential of digital tools and advanced sensors -, fostering standardisation and enhancing quality controls for more efficient production and deployment of these innovative therapies, ideally covering the entire manufacturing lifecycle.

The proposals should address all the following activities for only one chosen category of ATMP as defined by Regulation 1394/2007 per proposal:

- Design an improved manufacturing process for ATMPs by:
 - o Exploring the potential of platform technologies in manufacturing, quality control, non-clinical or clinical testing;
 - o Integrating either computational modelling, automation, robotics or digital/Artificial Intelligence solutions with meaningful and measurable impact;

²¹³ A centre of excellence refers to a team with a clear focus on a particular area of research; such a centre may bring together faculty members from different disciplines and provide shared facilities.

²¹⁴ ATMPs as classified by the European Medicines Agency (EMA): <https://www.ema.europa.eu/en/human-regulatory-overview/advanced-therapy-medicinal-products-overview>

- Verify the improved performance of the developed process, in comparison to established ones.
- Demonstrate a reduction in the timeframe and costs of manufacturing while maintaining product quality and standardisation.
- Demonstrate the translatability, scalability, and robustness of the process suitable for the flexible manufacturing (centralised or decentralised) and deployment of ATMPs by important stakeholders in a patient-centric manner, including the medical community and hospitals.
- Assess the process and methods developed for their regulatory validity and utility (for example standardised assays including for potency), taking into consideration the potential regulatory impact of the results and, as relevant, develop a regulatory strategy for generating appropriate evidence as well as engaging with regulators in a timely manner.
- Promote green and sustainable industrial production and minimise environmental impact.

Participation of small and medium-sized enterprises (SMEs) is strongly encouraged and proposals should include a commitment for first deployment in the EU.

Where relevant, proposals are warmly invited to liaise with the Coordination and Support Action (CSA) project JOIN4ATMP²¹⁵, in view of creating complementarities and potential synergies.

The Joint Research Centre (JRC) may participate as a member of the consortium selected for funding. Proposals should consider the involvement of the European Commission's JRC regarding its experience in this field and with respect to the value it could bring in providing an effective interface between research activities and pre-normative science as well as strategies and frameworks that address regulatory requirements. In that respect, the JRC will consider collaborating with any successful proposal and this collaboration, when relevant, should be established after the proposal's approval.

Applicants envisaging to include clinical studies²¹⁶ should provide details of their clinical studies in the dedicated annex using the template provided in the submission system.

HORIZON-HLTH-2025-01-IND-02: Digitalisation of conformity assessment procedures of medical devices and in vitro diagnostic medical devices

Call: Cluster 1 - Health (Single stage - 2025)

²¹⁵ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/org-details/999999999/project/101137206/program/43108390/details>,
<https://cordis.europa.eu/project/id/101137206>

²¹⁶ Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In recognition of the opening of the US National Institutes of Health's programmes to European researchers, legal entities established in the United States of America may exceptionally participate as a beneficiary or affiliated entity, and are eligible to receive Union funding.</p> <p>Coordinators of projects must be legal entities established in an EU Member State or Associated Country.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ²¹⁷.</p>

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Maintaining an innovative, sustainable, and competitive EU health industry”. To that end, proposals under this topic should aim to deliver

²¹⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

results that are directed, tailored towards and contributing to all the following expected outcomes:

- Notified Bodies (NBs), device²¹⁸ developers and manufacturers adopt digitalisation in their conformity assessment procedures thus facilitating device development. As certain steps of conformity assessment do also require involvement of regulatory authorities (e.g. consultation of medicines authorities), digitalisation of these steps would also bring relevant benefit;
- Device developers and manufacturers have access to digitalised conformity assessment procedures. These procedures will become more efficient, less onerous, and more predictable, which will reduce costs and shorten the time to market access;
- Device developers and manufacturers, in particular small and medium-sized enterprises (SMEs), can direct a larger part of their resources towards the research and development of innovative devices.

Scope: The regulations on Medical Devices (MDR) and *In Vitro* Diagnostic Medical Devices (IVDR) have introduced stricter regulatory requirements in view of ensuring a high level of patient safety and public health. The implementation of the new regulatory requirements still remains a challenge for manufacturers. SMEs face particular challenges as they have limited resources to adapt to the new framework. One of the main issues reported by manufacturers is the complexity and perceived unpredictability of the conformity assessment procedure involving a Notified Body.

The Medical Device Coordination Group (MDCG) assists the Commission and the Member States in ensuring a harmonised implementation of the MDR and IVDR, notably through the development of guidance and templates. Notably, the conformity assessment procedures are still based on continuous exchange of highly complex technical documentation in an electronic format (e.g., pdf or excel files) between the key actors of NBs and manufacturers, requiring several iterations between them. Further digitalisation of this process (from document to data-driven processes) can bring greater efficiency, accuracy, and transparency and lead to a more predictable and harmonised assessment process. This is expected to reduce the administrative burden as well as certification timelines and facilitate the conformity assessment procedure for manufacturers, particularly SMEs. In turn, this will contribute to maintaining the EU as a business-friendly environment for all manufacturers, which will ultimately benefit patients. For example, digitalisation can lead to simplification through the reduction of administrative burden, use of a single-entry point for all exchange of information. If relevant, applicants may liaise with an ongoing study on supporting the monitoring of the availability of medical devices in the EU market²¹⁹. Potential improvements related to digitalisation can include pre-defining mandatory data elements, the possibility of getting

²¹⁸ For the purpose of this topic, the reference to ‘devices’ includes both medical devices and *in vitro* diagnostic medical devices, unless otherwise specified.

²¹⁹ Study commissioned by the European Commission’s Directorate-General for Health and Food Safety via the European Health and Digital Executive Agency (results not yet published): https://health.ec.europa.eu/study-supporting-monitoring-availability-medical-devices-eu-market_en

alerts on whether data is complete, the identification of missing parts and inconsistencies and a reduction of error rates in this regard. Overall improved communication would be anticipated with digitalisation.

Any actions as part of the proposal will be performed under the current regulatory framework and will not involve changing MDR/IVDR requirements. Proposals should present a major step towards digitalisation in Europe and Associated Countries. Governance of a potential IT infrastructure developed in Europe and Associated Countries is outside the scope of the topic.

The proposals should cover all the following points:

- all steps of the MDR/IVDR procedures, from manufacturer's preparation of technical documentation and other pre-application activities for certification to issuance of a MDR/IVDR certificate by a NB;
- all actors involved in the conformity assessment procedure, including manufacturers, NBs, EU reference laboratories, expert panels of medical devices, as well as agencies involved in the consultation activities;
- a good representation of different NBs, including representation from small and large NBs, public and private NBs and a representative mix focusing on medical devices and *in vitro* diagnostic medical devices. The proposal should put a strong focus on consensus building activities between the different stakeholders involved.

The proposals should address all the following activities:

- Feasibility study
 - o Review existing initiatives aimed at digitalising MDR/IVDR conformity assessment procedures, or part thereof, and investigate digitalisation of conformity assessment/approval procedures for devices in other jurisdictions (e.g., US Food and Drug Administration). Consider lessons learned from digitalising conformity assessment procedures in other areas than medical devices.
 - o Examine basic processes/workflows established by individual NBs.
 - o Identify main steps of the conformity assessment procedure to be digitalised, actors involved, and essential elements and requirements to be considered prior to digitalisation.
 - o Collect and analyse feedback from main stakeholders on challenges and feasibility of the digitalisation process, identify interoperability with existing workflows used by manufacturers and/or NBs.
 - o Determine technical specifications required for the digitalisation as well as the possible options regarding digital transformation platforms.

- o Analyse facilitating factors, main challenges, possible solutions and required resources.
- Pilot
 - o Develop a pilot for the whole or part of the MDR/IVDR conformity assessment procedure, including Key Performance Indicators (KPI). This will involve collaboration with relevant stakeholders, including NBs, manufacturers, the European Commission and other involved parties.
 - o Develop a dedicated platform to run the pilot or identify an existing platform suitable for the pilot.
- Roadmap towards digitalisation
 - o Based on the lessons learned from the pilot, identify different steps to scale-up the pilot in order to digitalise MDR/IVDR conformity assessment procedures, or part of them. Identify associated challenges and possible solutions to address these.
 - o Present a roadmap to the piloted approach, including possible alternatives, covering actors involved and resources needed.

HORIZON-HLTH-2025-03-IND-03-two-stage: Facilitating the conduct of multinational clinical studies of orphan devices and/or of highly innovative (“breakthrough”) devices

Call: Cluster 1 - Health (Two stage - 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply:

	<p>In recognition of the opening of the US National Institutes of Health's programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>For the first stage, the thresholds for each criterion will be 4 (Excellence) and 4 (Impact). The overall threshold applying to the sum of the two individual scores will be set at a level that ensures the total requested budget of proposals admitted to stage 2 is as close as possible to four times the available budget, and not less than three and a half times the available budget.</p> <p>For the second stage, the thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ²²⁰.</p>

²²⁰

This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Expected Outcome: This topic aims at supporting activities that are enabling or contributing to one or several expected impacts of destination “Maintaining an innovative, sustainable, and competitive EU health industry”. To that end, proposals under this topic should aim to deliver results that are directed, tailored towards and contributing to all the following expected outcomes:

- Healthcare providers increase their hands-on experience regarding the clinical use of orphan devices²²¹ and/or of highly innovative (“breakthrough”) devices and get timely access to such devices with demonstrated clinical benefits;
- Developers and manufacturers collect and obtain scientific evidence on their proposed intervention/ approach with the device under investigation;
- Patients benefit from the development, studies and use of orphan devices and/or of highly innovative (“breakthrough”) devices;
- Companies in the EU and associated countries get a better market position in this field and improve their knowledge on how to conduct multinational clinical studies for these devices.

Scope: The focus of this topic is on multinational clinical studies²²² of orphan devices²²³ and/or of highly innovative (“breakthrough”) devices, including digital and Artificial Intelligence (AI) based tools and techniques.

The emphasis within rare disease research and innovation has predominantly centred on pharmaceuticals, leaving a noticeable gap in the support for developing orphan devices. Orphan devices are specifically intended for use in rare diseases or conditions or in specific indications for rare cohorts of patients with an otherwise non-rare disease or condition. As, by their nature, orphan devices are intended for use in a small number of individuals each year, often infants and children, generating clinical data within an appropriate period of time and conducting clinical investigations is especially challenging due to low patient recruitment volumes.

Besides orphan devices, also highly innovative (“breakthrough”) devices are in the scope of this topic if they are expected to provide major clinical benefits for the treatment, diagnosis or

²²¹ For the purpose of this topic, the reference to ‘devices’ includes both medical devices and *in vitro* diagnostic medical devices, unless otherwise specified.

²²² See definition of clinical studies in the introduction to this work programme part.

²²³ A device should be regarded as an ‘orphan device’, if it meets the following criteria: i) the device is specifically intended to benefit patients in the treatment, diagnosis, or prevention of a disease or condition that presents in not more than 12.000 individuals in the European Union per year and ii) at least one of the following criteria are met:

- there is insufficiency of available alternative options for the treatment, diagnosis, or prevention of this disease/condition, or
- the device will offer an option that will provide an expected clinical benefit compared to available alternatives or state of the art for the treatment, diagnosis, or prevention of this disease/condition, taking into account both device and patient population-specific factors. MDCG 2024-10 Guidance on clinical evaluation of orphan medical devices: https://health.ec.europa.eu/document/download/daa1fc59-9d2c-4e82-878e-d6fdf12ecd1a_en?filename=mdcg_2024-10_en.pdf.

prevention of a life threatening, seriously debilitating or serious and chronic disease or condition, regardless of whether they target small patient populations. Highly innovative (“breakthrough”) devices²²⁴ aim to address unmet medical needs. ‘Unmet medical needs’ should be understood as a condition for which there exists no satisfactory method of diagnosis, prevention or treatment in the EU or, even if such a method exists, in relation to which the device concerned will be of major advantage to those affected²²⁵. Those may include devices using digital tools and AI based technologies.

Developers of such devices often face challenges to generate clinical data in the pre-market phase in a timely manner.

Time and cost of clinical data collection can adversely affect public health by significantly delaying the availability of devices needed to treat or diagnose rare diseases or conditions or that may improve patient care or public health. Many devices are used off-label to respond to this unmet need. Nonetheless, a high level of clinical evidence based on thorough clinical data is needed to ensure patient safety.

Clinical development strategies for implementing multinational clinical studies have the potential to offer improved efficiency and to reach larger patient samples. Challenges may arise from the potential uncertainty regarding how regional disparities in regulatory, clinical, business, ethical and cultural practices may affect study design, conduct, data interpretation and various other outcomes.

This topic targets those challenges by supporting multinational studies aiming to gather pre- or post-market clinical data to demonstrate the device’s safety and performance (including determination of any undesirable side-effects and their acceptability when weighed against the expected clinical benefits).

The proposals should demonstrate that they address all the following activities for a device that is an orphan device or a highly innovative “breakthrough” device (or both), at any point of the pre- or post-market stage, including the development stage, with the overall purpose to generate data in support of CE marking under the Regulations on medical devices (MDR) or *in vitro* diagnostic medical devices (IVDR):

- Design and conduct multinational clinical studies in a minimum of two different countries in the EU or Associated Countries, with a focus on orphan devices and/or highly innovative (“breakthrough”) devices, with a view to demonstrate the safety and clinical performance of the device(s) subject to the study.
- Present a sound clinical study feasibility plan, including an appropriate patient selection and realistic recruitment plans at different sites, justified by scientific publications or

²²⁴ See Appendix 8 to MEDDEV 2.7/1 revision 4 (<https://ec.europa.eu/docsroom/documents/17522/attachments/1/translations>) or the FDA’s Breakthrough Devices Program (<https://www.fda.gov/medical-devices/how-study-and-market-your-device/breakthrough-devices-program>).

²²⁵ Based on Article 4(2) of Commission Regulation 507/2006 which defines the term ‘unmet medical needs’ in the field of medicinal products.

preliminary results. Proposals should adopt a gender-sensitive and intersectional approach, considering individual characteristics such as gender, sex, race, ethnicity, disability and age. Additionally, socioeconomic, lifestyle and behavioural factors should be taken into account. For this, the topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

- Demonstrate potential clinical benefit²²⁶ for patients and healthcare providers, including quality of life and consideration of patient-reported outcomes when relevant.
- Involve patients, patient organisations, carers and healthcare professionals in the design of the clinical studies.
- Identify, collect and record relevant good practices and experiences related to the design, conduct, sample handling, data analysis and results reporting of multinational clinical studies. In addition, provide appropriate recommendations and lessons learned.
- For multinational clinical studies, authorisation for the study approval by more than one national competent authority may be necessary. Develop a regulatory strategy and interaction plan for generating appropriate evidence as well as engaging with regulators and other relevant bodies (e.g., European Medicines Agency (EMA), EMA expert panels²²⁷, national regulators, Health Technology Assessment bodies, etc.) in a timely manner. Consider also the potential for future regulatory impact of the results.

Proposals may include multiple devices, but the minimum expected is one device.

Participation of small and medium-sized enterprises (SMEs) is strongly encouraged.

For orphan devices or highly innovative devices relevant to rare disease patients, applicants should look for complementarities and potential synergies with actions implemented under ERDERA²²⁸ the co-funded European Partnership on Rare Diseases proposed under Horizon Europe²²⁹, as well as synergies with actions implemented under the EU4Health programme.

The Joint Research Centre (JRC) may participate as a member of the consortium selected for funding. Proposals should consider the involvement of the European Commission's JRC regarding its experience in this field and with respect to the value it could bring in providing

²²⁶ 'Clinical benefit' is defined in the Medical Device Regulation (EU) 2017/745, Article 2(53) as follows: Clinical benefit means the positive impact of a device on the health of an individual, expressed in terms of a meaningful, measurable, patient-relevant clinical outcome(s), including outcome(s) related to diagnosis, or a positive impact on patient management or public health.

²²⁷ EMA pilots scientific advice for certain high-risk medical devices - European Medicines Agency (EMA): <https://www.ema.europa.eu/en/news/ema-pilots-scientific-advice-certain-high-risk-medical-devices>

²²⁸ 'European Rare Diseases Research Alliance', <https://cordis.europa.eu/project/id/101156595>

²²⁹ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-hlth-2023-disease-07-01>

an effective interface between research activities and pre-normative science as well as strategies and frameworks that address regulatory requirements. In that respect, the JRC will consider collaborating with any successful proposal and this collaboration, when relevant, should be established after the proposal's approval.

Applicants should provide details of their clinical studies²³⁰ in the dedicated annex using the template provided in the submission system. As proposals under this topic are expected to include clinical studies, the use of the template is strongly encouraged.

²³⁰ Please note that the definition of clinical studies (see introduction to this work programme part) is broad and it is recommended that you review it thoroughly before submitting your application.

Other Actions not subject to calls for proposals

Grants to identified beneficiaries

1. Grant to the Global Alliance for Chronic Diseases (GACD)

Expected Outcome: Proposals should set out a credible pathway to contributing to one or several expected impacts of destination “Tackling diseases and reducing disease burden”.

Project results are expected to contribute to the following expected outcome: enable the European Commission to take part in GACD²³¹, which brings together leading health research funding agencies of key countries (currently Australia, Brazil, Canada, India, Japan, New Zealand, South Africa, Thailand, UK and USA) to coordinate research activities addressing on a global scale the prevention and treatment of chronic, non-communicable diseases such as cardiovascular diseases, diabetes, mental and neurological diseases, lung diseases and cancer.

Scope: Recommendations of GACD are expected to have a fundamental value for future orientation of public health research policy. This will also contribute to the implementation of the Union’s strategy for international cooperation in research and innovation.

Award criteria:

The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.

Procedure:

The evaluation committee will be composed fully by representatives of EU institutions.

Legal and financial set-up of the Grant Agreements:

Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025)²³².

The funding rate will be 100%.

Legal entities:

GACD Action, Wellcome Building, 215 Euston Road, London NW1 2BE, United Kingdom

²³¹ <https://www.gacd.org>

²³² This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: Fourth Quarter of 2025

Indicative budget: EUR 0.60 million from the 2025 budget

2. Presidency event - Cyprus. Advancement of Treatments for Rare Diseases

This action will cover the organisation of a high-level conference by the Cypriote presidency on the advancement of treatments for Rare Diseases within the EU.

Rare Diseases (RDs), often called orphan diseases, are a large (>7000) and diverse group of disorders that collectively pose a substantial disease burden and affect approximately 30 million people in the EU. The proposed conference should align with the goal of making Europe a world leader in RD research and innovation, addressing the challenges faced by patients with RDs and improving their access to effective treatments and care across Europe. It should aim to engage stakeholders in the RD community to support concrete health benefits to patients through the development of innovative treatments.

The conference should be informed by key EU initiatives on RDs both on healthcare and research sides, such as:

- The European Reference Networks (ERNs)²³³, their registries, their Joint Action JARDIN²³⁴ (all funded under the EU4Health programme) and their clinical research coordination platform ERICA²³⁵ (funded under Horizon 2020).
- The Horizon Europe European Partnership on Rare Diseases, namely the European Rare Diseases Research Alliance (ERDERA)²³⁶, and its predecessor the European Joint Program co-fund on Rare Diseases (EJP RD)²³⁷.
- The European Platform on Rare Disease Registration (EU RD Platform)²³⁸.

²³³ https://health.ec.europa.eu/rare-diseases-and-european-reference-networks/european-reference-networks_en

²³⁴ <https://jardin-ern.eu>

²³⁵ <https://cordis.europa.eu/project/id/964908>, <https://erica-rd.eu>

²³⁶ <https://cordis.europa.eu/project/id/101156595>, <https://erdera.org>

²³⁷ <https://cordis.europa.eu/project/id/825575>, <https://www.ejprarediseases.org>

²³⁸ https://eu-rd-platform.jrc.ec.europa.eu/_en

- Public-private projects under the Innovative Health Initiative (IHI) such as Conect4Children²³⁹ (pan-European collaborative pediatric network for high quality clinical trials in children), Screen4Care²⁴⁰ and RealiseD.
- EU policies and regulations to incentivise the development of orphan drugs, the encouragement of member states to develop national plans and strategies for treatment of RD.

The conference should aim to address the following goals:

- Raise national profiles, for example by leveraging tools offered by the ERDERA Partnership and enhance awareness, knowledge exchange, collaboration and coordination between stakeholders in RD treatments.
- Promote innovation and research that accelerates the translation of scientific findings into new therapies as well as repurposing of already approved drugs for RDs.
- Explore ways to improve the regulatory framework for the approval and equity of access to orphan drugs, ensuring that safe and effective treatments reach patients across all member states.
- Discuss potential solutions to enhance data security, sharing and infrastructure for research and treatment of RDs, recognising the critical role of big data in advancing medical knowledge, enabling AI-based solutions and improving patient outcomes.

The conference should aim to engage with a diverse audience across sectors and disciplines, including representatives from national political, health and research authorities; national research funding agencies; private investors; patients and advocacy groups; EU institutions and agencies; healthcare providers, clinicians and researchers. Participants should also include representatives from pharmaceutical and biotechnology companies and from regulatory bodies such as the European Medicines Agency (EMA), technology and data specialists, Non-Governmental Organisations (NGOs), media professionals, health technology assessment (HTA) experts, legal and ethical experts.

The inclusion of these key stakeholders should ensure the relevance and actionability of the conference's conclusions which are expected to be summarised in a report. This report should provide a comprehensive framework for addressing the challenges and opportunities related to RDs in Europe.

Award criteria:

The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.

²³⁹ <https://cordis.europa.eu/project/id/777389>, <https://conect4children.org>

²⁴⁰ <https://cordis.europa.eu/project/id/101034427>, <https://www.screen4care.eu>

Procedure:

The evaluation committee will be composed fully by representatives of EU institutions.

Legal and financial set-up of the Grant Agreements:

Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025)²⁴¹.

The funding rate will be 100%.

Subcontracting is not restricted to a limited part of the action.

Legal entities:

The Cyprus Institute of Neurology and Genetics, 6 Iroon Avenue, 2371 Nicosia, Cyprus

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: Second Semester of 2025

Indicative budget: EUR 0.30 million from the 2025 budget

3. Supporting European and global efforts to sustain the global biodata ecosystem

Expected Outcome:

Results under this action are expected to contribute to all the following expected outcomes:

- Promote dialogue, exchange and strategic cooperation among public and private research funders in the EU and globally to ensure the long-term sustainability of and access to a robust and open biodata ecosystem for life sciences R&I.

²⁴¹ This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Enhance knowledge and expertise on global biodata resources, including through analysis on their quality, utility, reliability, interoperability and cost, that would enable funders to make informed decisions about supporting these resources.

The action is expected to contribute to enhanced sustainability of and access to global biodata resources, thus advancing groundbreaking scientific research and innovation with the aim to solving global health challenges.

Scope:

This action continues and builds on an international initiative supporting the long-term sustainability of and access to key biodata resources for life sciences R&I, as executed through an organisation named the Global Biodata Coalition. The experience from this initiative underlines the continued need for global coordination to support and protect the fragile and vulnerable ecosystem of biodata resources that are essential for life sciences, including the ongoing and growing need to enhance the quality, reliability, interoperability and accessibility of biodata. In this context, the proposal should address:

- The establishment of a secretariat supporting the work needed for the achievement of this objective, including through the identification of (and interaction with) global biodata resources. The secretariat provides activities which inform and support the funding community about how best to ensure the health and well-being of the global biodata ecosystem, including providing technical advice and expertise to strengthen institutional and administrative capacity to accelerate financial support for the planning, development and implementation of biodata resources.
- The establishment of a governance framework and the creation of a fora for discussion of strategic funding priorities and strategic decision-making to ensure long-term support and sustainability of the global biodata ecosystem.

The work of the secretariat and governance framework should address global and European needs in biodata sustainability, taking into account specific contexts. The Secretariat will advocate and promote awareness of global ethical and data standards and principles arising from relevant international, European and national law.

It is expected that the proposal has a period of implementation of at least five years.

Award criteria:

The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold will be 12.

Legal and financial set-up of the Grant Agreements:

Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the

Research and Training Programme of the European Atomic Energy Community (2021-2025)²⁴².

The funding rate will be 100%.

Subcontracting is not restricted to a limited part of the action.

Legal entities:

EMBL - European Molecular Biology Laboratory, Meyerhofstrasse 1, 69117, Heidelberg, Germany

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: Second Semester of 2025

Indicative budget: EUR 5.00 million from the 2025 budget

Other Instruments

1. Studies, conferences, events and outreach activities

A number of specific contracts will be signed in order to: (i) support the dissemination and exploitation of project results; (ii) contribute to the definition of future challenge priorities; (iii) undertake citizen surveys such as Eurobarometers; (iv) carry out specific evaluations of programme parts; (v) support future European Research Area (ERA) policy actions; and (vi) organise conferences, events and outreach activities.

Subject matter of the contracts envisaged: studies, technical assistance, conferences, events and outreach activities.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: 2025

Indicative budget: EUR 1.37 million from the 2025 budget

²⁴² This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

2. Subscription to the Human Frontier Science Program Organization

An annual subscription to the international Human Frontier Science Program Organization (HFSP)²⁴³ will allow researchers from EU non-G7 Member States to fully benefit from the Human Frontier Science Program (HFSP), enable initiatives to help the affected scientific community in and from areas recently severely ravaged by conflict and/or war on European ground and contribute to the implementation of the Global Approach to Research and Innovation, Europe's strategy for international cooperation in a changing world²⁴⁴.

Type of Action: Subscription action

Indicative timetable: Second Quarter of 2025

Indicative budget: EUR 6.92 million from the 2025 budget

3. External expertise in relation to EU research and innovation policy issues

This action will support the provision of independent expertise in support of the assessment, design, implementation, evaluation and valorisation of EU research and innovation policies in the areas currently in scope of the Health Cluster.

Individual experts will work on tasks such as, but not limited to: portfolio analysis of projects funded under Horizon Europe or previous European research and innovation programmes; analysis of the contribution of research results (at national, EU and/or international level) to EU policy objectives and emerging issues, including policy recommendations; analysis of the state-of-the-art at European and international level; participation in studies, conferences, events, symposia, etc, including the drafting of papers and reports on their conclusions; assistance for setting-up a research and innovation strategy for selected domains; policy recommendations and options assisting Commission services in elaborating evidence-based and scientifically sound policy proposals; assistance in the evaluation of calls for expression of interest; advice on the valorisation, communication, dissemination and exploitation of research results; identification of innovative solutions as well as potential gaps and synergies to be addressed by EU research and innovation policy; advise on promising technologies covered by European and nationally funded projects and on ways to stimulate synergies, etc.

In addition to individual experts, this action could provide for Commission expert groups.

A special allowance of maximum EUR 450/day will be paid to the experts appointed in their personal capacity who act independently and in the public interest.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

²⁴³ The European Commission is a member of the HFSP Organization (HFSP) and has funded HFSP under previous Framework Programmes

²⁴⁴ Communication from the Commission on the Global Approach to Research and Innovation. Europe's strategy for international cooperation in a changing world, COM(2021) 252, 18.5.2021 (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2021%3A252%3AFIN>).

Indicative budget: EUR 0.10 million from the 2025 budget

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Horizon Europe - Work Programme 2025
Health

Budget^{245 246}

	Budget line(s)	2025 Budget (EUR million)	2026 Budget (EUR million)	2027 Budget (EUR million)
Calls				
HORIZON-HLTH-2025-01		486.00		
	<i>from 01.020210</i>	<i>486.00</i>		
HORIZON-HLTH-2025-02		133.50	46.50	47.00
	<i>from 01.020210</i>	<i>133.50</i>	<i>46.50</i>	<i>47.00</i>
HORIZON-HLTH-2025-03-two-stage		210.00		
	<i>from 01.020210</i>	<i>210.00</i>		
Other actions				
Grant awarded without a call for proposals according to Financial Regulation Article 198(e)		5.90		
	<i>from 01.020210</i>	<i>5.90</i>		
Public procurement		1.37		
	<i>from 01.020210</i>	<i>1.37</i>		
Subscription action		6.92		
	<i>from 01.020210</i>	<i>6.92</i>		
Expert contract action		0.10		
	<i>from</i>	<i>0.10</i>		

²⁴⁵ The budget figures given in this table are rounded to two decimal places.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

²⁴⁶ The contribution from Cluster 1 for the year 2025 is EUR 129.14 million for the Missions work programme part and EUR 23.55 million for the New European Bauhaus Facility work programme part.

Horizon Europe - Work Programme 2025
Health

	01.020210			
Estimated total budget		843.79	46.50	47.00

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Horizon Europe
Work Programme 2025

5. Culture, Creativity and Inclusive Society

IMPORTANT NOTICE:

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

This draft is made public before the adoption of the work programme to provide potential participants with the currently expected main lines of this work programme. Only the adopted work programme will have legal value.

The adoption of the work programme will be announced on the Horizon Europe website and on the Funding and Tenders Portal.

Information and topic descriptions indicated in this draft may not appear in the final work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

The Commission expressly disclaims liability for any future changes of the content of this document.

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Introduction

Cluster 2, 'Culture, Creativity and Inclusive Society' aims to meet EU goals and priorities on enhancing democratic governance and citizens participation, on the safeguarding and promotion of cultural heritage, and to respond to and shape multifaceted social, economic, technological and cultural transformations. Cluster 2 mobilises multidisciplinary expertise of European social sciences and humanities (SSH) for understanding fundamental contemporary transformations of society, economy, politics and culture. It aims to provide evidence-based policy options for a socially just and inclusive European green and digital transition and recovery.

The EU is strongly committed to the UN Sustainable Development Goals (SDGs), many of which have an important impact on culture, creativity, and inclusive society, notably: SDG 1 (No poverty), SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), SDG 10 (Reduced Inequalities), SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), and SDG 16 (Peace, Justice, and Strong Institutions), with their specific targets to achieve a better and more sustainable future for all.

Proposals are invited against the following three (3) destinations:

Activities contributing to the **destination "Innovative Research on Democracy and Governance"**, will provide knowledge, data and scientifically robust recommendations to reinvigorate and defend democratic governance and improve trust in democratic institutions. In the long-term, this will contribute to help safeguard fundamental rights to empower active and inclusive citizenship. By doing so, they will also strengthen accountability, transparency, effectiveness and trustworthiness of rule of law-based institutions and policies. Activities will help address an increasing number of threats from both internal and external actors, notably those who use harming methods enabled by digital technologies and social media. They will focus on tackling increased hatred, disinformation, information manipulation, and foreign interference, as well as the polarisation of political debate. The fight against radicalisation and extremism will be a priority, alongside efforts to combat social isolation caused by online group dynamics and addressing algorithmic bias. Combating antisemitism and minority discrimination will be essential to building a more inclusive and equitable society.

Activities contributing to the **destination "Innovative Research on the European Cultural Heritage and the Cultural and Creative Industries"**, will support research and innovation to boost sustainable growth and job creation through the cultural and creative industries. R&I actions will promote artificial intelligence for creativity and innovation, better access and engagement with cultural heritage and improve its protection, enhancement and restoration. A new European partnership for Resilient Cultural Heritage will be launched, and support for the European Collaborative Cloud for Cultural Heritage will be continued.

At the same time, through the **destination "Innovative Research on Social and Economic Transformations"**, actions will help tackle social, economic and political inequalities,

support human capital development and contribute to a comprehensive European strategy for inclusive growth. Activities will improve the understanding of how technological, climate, economic and demographic changes impact society. They will inform the design of policies addressing existing and emerging challenges, harnessing new opportunities (particularly in the areas of employment, education, mental health and well-being) and contributing to reaching the objectives set out by the Action Plan of the European Pillar of Social Rights. A key focus of the activities will be to boost sustainability and inclusion, by supporting vulnerable groups and protecting individuals from discrimination (based on sex, gender, racial or ethnic origin, religion or belief, disability, age or sexual orientation).

Horizon Europe is the research and innovation programme in a system of European and national funding programmes which share policy objectives. Through the programme, special attention will be given to ensuring cooperation between universities, scientific communities and industry, including small and medium enterprises, and citizens and their representatives, to bridge gaps between territories, generations and regional cultures, especially caring for the needs of the young in shaping Europe's future. Funded projects could be EU Synergies grants, meaning that as such, they have the possibility to also receive funding under other EU programmes. To enable synergies by design in this context, project proposers should consider and actively seek strategic combinations with, and where appropriate possibilities for further funding from, other R&I-relevant EU, national or regional and cross-border programmes (such as ERDF including Interreg, ESF+, JTF, EMFF, EAFRD and InvestEU), as well as private funds or financial instruments.

The EU's Recovery and Resilience Facility (RRF) aims at financing projects that directly tackle the economic and social impacts from the Coronavirus crisis and support the green and digital transition. For project ideas that directly contribute to these objectives and that have a strong focus in one Member State it is advisable to check access to the RRF for a fast and targeted support.

Synergies with relevant Union programmes will be sought, regarding the take-up of research results and innovative solutions developed under Horizon Europe, for example via the following programmes:

- Creative Europe: it improves the safeguarding and valorisation of cultural heritage and further supports the cultural and creative sector. Creative Europe can improve sectorial networking and cooperation of Member States and non-EU Participating Countries in the Creative Europe Programme¹ to apply the latest technologies, stimulate new scientific approaches and boost innovation potential stemming from Horizon Europe.
- Erasmus+: it supports efforts to efficiently use the potential of Europe's talent and social assets in a lifelong learning perspective throughout the education, training and youth fields. It promotes measures for the inclusion of people with fewer opportunities, including newly arrived migrants, and supports skills development and citizens' participation and engagement, encouraging young people to engage and learn to

¹ [list-3rd-country-participation_crea_en.pdf \(europa.eu\)](#)

participate in civic society and democratic life, raising awareness about EU values, including via online platforms and tools for virtual cooperation. As regards Cluster 2, Erasmus+ projects could benefit for instance from the use of innovative practices for migrant integration in education, up-take of innovative methods for citizen engagement and education for fostering EU values and democracy stemming from Horizon Europe.

- Global Europe, the EU's Neighbourhood, Development and International Cooperation Instrument: it supports and consolidates democracy, rule of law and human rights, supports civil society organisations outside the EU, furthers stability and peace and addresses other global challenges including migration and mobility. The actions can benefit from drawing on the findings of H2020 and Horizon Europe projects regarding trust in governance, tackling disinformation and citizens' participation and engagement.
- Digital Europe Programme (DIGITAL): while Horizon Europe supports research and development of digital technologies, DIGITAL supports the wide uptake and deployment of innovative digital solutions in areas of public interest (including public administration, justice and education), by setting up and making accessible Europe-wide data spaces and platforms and providing SMEs and public administrations access to the latest digital technologies, for example via Digital Innovation Hubs. Priority actions for the first four years of DIGITAL include "Safer internet for kids", a "Platform for combating disinformation", supporting the EU language technology industry in developing and deploying latest AI-based technologies in all EU languages, contributing to the skills and employment of ICT professionals (including women and girls) and the EU digital platform for cultural heritage, Europeana, which supports the digital transformation of cultural heritage institutions.
- Technical Support Instrument (TSI): by supporting the efforts of the national authorities in improving their administrative capacity to design, develop and implement reforms, the TSI can benefit from the good practices, innovative processes and methodologies identified or developed in H2020 and Horizon Europe projects, and get access to the expertise in research bodies participating to such projects.
- Citizens, Equality, Rights and Values programme: the programme can draw on the results of H2020 and Horizon Europe projects in the field of citizens' engagement, to support civil society organisations in encouraging and facilitating active participation in the construction of a more democratic Union and awareness raising of EU rights and values.
- European Social Fund Plus (ESF+): The programme aims to promote social cohesion and equip people with the skills needed for the evolving demands of the labour market. Member States and regions can use the ESF+ to mainstream and upscale innovative technologies and solutions in the areas of employment, social inclusion, education and training, including successful models and practices developed under Horizon 2020 and Horizon Europe. In addition, the ESF+ can support operations and researchers granted a Seal of Excellence under Horizon Europe.

- European Regional Development Fund: ERDF focuses, among others, on the development and strengthening of regional and local research and innovation ecosystems and smart economic transformation, in line with regional/national smart specialisation strategies. It can support investment in research infrastructures, activities for applied research and innovation (including industrial research), experimental development and feasibility studies, building research and innovation capacities and the uptake of advanced technologies and roll-out of innovative solutions from the Framework Programmes for research and innovation through the ERDF. It helps governments reap the benefits of digitisation and encourages investments in social and cultural infrastructure, the development of cultural services and the conservation of cultural heritage. Interreg is a main instrument of ERDF to support cooperation across regions and countries. Support to the protection and development of cultural heritage, to SMEs, to social innovation in culture and creative industries is central to Interreg. Interreg can also complement Horizon Europe's initiatives by supporting policy learning and regional cooperation.
- European Agricultural Fund for Rural Development (EAFRD): relevant stakeholders can benefit from the dissemination and take-up of R&I results in the field of cultural heritage, in particular in rural and remote areas.
- The InvestEU Programme can fund the uptake of R&I results related to Cultural and Creative Industries (CCI) and cultural heritage.
- The Asylum, Migration and Integration Fund (AMIF) supports the EU migration policy to strengthen and develop all aspects of the common European asylum system, support legal migration to the Member States and effective integration policies. It contributes to countering irregular migration. Horizon Europe contributes to the implementation of the AMIF providing an evidence base for policies and projects, as regards asylum protection, legal and irregular migration management and migrant integration.

To increase the impact of EU investments under Horizon Europe, the European Commission encourages collaboration between EU-funded projects to build on complementarities through networking, joint workshops, knowledge exchange, best practices, and joint communication activities. Complementarities can be explored between projects funded under the same or different topics, Clusters or pillars of Horizon Europe. This includes collaborations between projects funded under Cluster 1 and Cluster 2 for complementary actions, such as promoting social inclusion, health equity (including gender equality and support for marginalised groups), and mental health initiatives in education, work, and daily life (including through culture and the arts). The cross-cluster complementarities are set out in detail in the Strategic Plan of Horizon Europe for 2025-2027.

In line with the EU's Global Approach to Research and Innovation, and as for the Work Programmes of 2021-2022 and 2023-2025, the Work Programme 2025 will remain almost completely open to the participation of non-associated third countries to all Research and Innovation Action (RIA) and Innovation Action (IA) topics. In support of the Global Gateway

Strategy², projects involving international partners should lead to increased scientific knowledge and transfer of technology among partner countries allowing to address global challenges across the world and create sustainable growth and jobs. Cooperation should take place in a value-based way, creating linkages, not dependencies

The topics in this cluster require the effective and extensive contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, to produce meaningful and significant effects enhancing the societal impact of the related research activities.

² https://ec.europa.eu/info/strategy/priorities-2019-2024/stronger-europe-world/global-gateway_en

CALL

Call - Culture, Creativity and Inclusive Society - 2025

HORIZON-CL2-2025-01

Overview of this call³

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁴	Indicative number of projects expected to be funded
		2025		
Opening: 15 May 2025 Deadline(s): 16 Sep 2025				
Destination Innovative Research on Democracy and Governance				
HORIZON-CL2-2025-01-DEMOCRACY-01: Advisory support and network to counter disinformation and foreign information manipulation and interference (FIMI)	CSA	3.50	3.00 to 3.50	1
HORIZON-CL2-2025-01-DEMOCRACY-02: Fostering the consolidation of European science diplomacy	CSA	3.00	2.50 to 3.00	1
HORIZON-CL2-2025-01-DEMOCRACY-03: Preparing the EU for future enlargement: challenges and opportunities	RIA	10.50	3.00 to 3.50	3
HORIZON-CL2-2025-01-DEMOCRACY-04: Open strategic autonomy, economic and research security in EU foreign policy	RIA	7.00	3.00 to 3.50	2

³ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁴ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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HORIZON-CL2-2025-01-DEMOCRACY-05: Countering and preventing radicalisation, extremism, hate speech and polarisation	RIA	10.50	3.00 to 3.50	3
HORIZON-CL2-2025-01-DEMOCRACY-06: Towards a European research hub on contemporary antisemitism and Jewish life and culture	CSA	3.50	3.00 to 3.50	1
HORIZON-CL2-2025-01-DEMOCRACY-07: The autocratic appeal: nature, drivers and strategies	RIA	10.50	3.00 to 3.50	3
HORIZON-CL2-2025-01-DEMOCRACY-08: Economic inequalities and their impact on democracy	RIA	10.50	3.00 to 3.50	3
HORIZON-CL2-2025-01-DEMOCRACY-09: Fighting against disinformation while ensuring the right to freedom of expression	RIA	10.50	3.00 to 3.50	3
HORIZON-CL2-2025-01-DEMOCRACY-10: The role of civic and citizenship education for strengthening civic and democratic participation and support for common European values	RIA	10.50	3.00 to 3.50	3
HORIZON-CL2-2025-01-DEMOCRACY-11: Independence of the judiciary as an aspect of rule of law compliance	RIA	10.50	3.00 to 3.50	3
HORIZON-CL2-2025-01-DEMOCRACY-12: Community of democracy practitioners and researchers	CSA	3.50	3.00 to 3.50	1
Destination Innovative Research on European Cultural Heritage and Cultural and Creative Industries				
HORIZON-CL2-2025-01-HERITAGE-03: A European Collaborative Cloud for Cultural Heritage – Innovative use cases	IA	26.00	2.50 to 4.00	8
HORIZON-CL2-2025-01-HERITAGE-04: Leveraging artificial intelligence for creativity-driven innovation	RIA	15.00	4.00 to 5.00	3
HORIZON-CL2-2025-01-HERITAGE-05:	RIA	10.50	2.50 to 3.50	3

Evolution of culture in a virtualising world				
HORIZON-CL2-2025-01-HERITAGE-06: Europe as a global powerhouse of design for sustainable competitiveness	RIA	13.50	3.50 to 4.50	3
HORIZON-CL2-2025-01-HERITAGE-07: Cultural Strategies for Peace: culture and creativity as catalysts for conflict prevention and post-conflict reconciliation	RIA	12.00	3.00 to 4.00	3
HORIZON-CL2-2025-01-HERITAGE-08: Bridging historical past and future potential through conservation, preservation, and adaptive use of Europe's contentious and dissonant heritage	CSA	3.50	2.50 to 3.50	1
HORIZON-CL2-2025-01-HERITAGE-09: Impacts of culture and the arts on health and well-being	CSA	2.00	Around 2.00	1
Destination Innovative Research on Social and Economic Transformations				
HORIZON-CL2-2025-01-TRANSFO-01: Tackling gender-based violence in different social and economic spheres	RIA	10.20	Around 3.40	3
HORIZON-CL2-2025-01-TRANSFO-02: Historical and regional analyses of industrial transitions and their lessons for ensuring a fair green transition	RIA	10.20	Around 3.40	3
HORIZON-CL2-2025-01-TRANSFO-03: Working time reduction: barriers, challenges, benefits and policy implications	RIA	10.20	Around 3.40	3
HORIZON-CL2-2025-01-TRANSFO-05: Improving fairness in the economy through a better understanding of undeclared and underdeclared work	RIA	10.20	Around 3.40	3
HORIZON-CL2-2025-01-TRANSFO-06: Evaluation and use of evidence in education policy and practice	RIA	10.20	Around 3.40	3
HORIZON-CL2-2025-01-TRANSFO-07: Impact of the learning environment and the use of digital tools in everyday life on key skills	RIA	10.20	Around 3.40	3

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and competence development				
HORIZON-CL2-2025-01-TRANSFO-08: Improving mental health outcomes for people in education, training and work	RIA	15.00	3.00 to 5.00	3
HORIZON-CL2-2025-01-TRANSFO-09: Good practices for increased autonomy of persons with disabilities, including physical, mental, intellectual and sensory disabilities	RIA	10.20	Around 3.40	3
HORIZON-CL2-2025-01-TRANSFO-10: Intergenerational fairness in the context of demographic change in the EU	RIA	10.20	3.00 to 4.00	3
HORIZON-CL2-2025-01-TRANSFO-11: Migration and climate change: building resilience and enhancing sustainability	CSA	2.00	Around 2.00	1
Overall indicative budget		275.10		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Culture, Creativity and Inclusive Society - 2025 - Two-stage

HORIZON-CL2-2025-02-TWO-STAGE

Overview of this call⁵

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁶	Indicative number of projects expected to be funded
		2025		
Opening: 15 May 2025				
Deadline(s): 16 Sep 2025 (First Stage), 17 Mar 2026 (Second Stage)				
Destination Innovative Research on European Cultural Heritage and Cultural and Creative Industries				
HORIZON-CL2-2025-02-HERITAGE-02-two-stage: Innovative approaches to intangible cultural heritage for societal resilience	RIA	12.00	3.00 to 4.00	3
Destination Innovative Research on Social and Economic Transformations				
HORIZON-CL2-2025-02-TRANSFO-04-two-stage: Gender differences in career trajectories of parents and their implications for gender equality and family well-being	RIA	10.20	Around 3.40	3
Overall indicative budget		22.20		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and</i>	The criteria are described in General Annex

⁵ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁶ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

<i>exclusion</i>	C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Cluster 2 Partnerships

HORIZON-CL2-2025-03

Overview of this call⁷

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁸	Indicative number of projects expected to be funded
		2025		
Opening: 15 May 2025 Deadline(s): 16 Sep 2025				
Destination Innovative Research on European Cultural Heritage and Cultural and Creative Industries				
HORIZON-CL2-2025-03-HERITAGE-01: Co-funded European partnership for Resilient Cultural Heritage	COFUND	60.00	Around 60.00	1

⁷ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁸ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Overall indicative budget		60.00		
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General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

DESTINATIONS

Destination Innovative Research on Democracy and Governance

Resilient and strengthened democratic systems, anchored in robust and inclusive political decision-making, will be fundamental in the context of complex and interconnected challenges and threats our citizens and societies are confronted with. As stated in the Political Guidelines for the European Commission 2024-2029, “Europe’s future in a fractured world will depend on having a strong democracy and on defending the values that give us the freedoms and rights that we cherish.”⁹

The Strategic Foresight Report 2023¹⁰ already recalled how “disenfranchisement, growing discontent, and the lack of a positive agenda combine into an erosion of trust in public institutions, polarisation, and an enhanced appeal of extremist, autocratic, or populist movements” and how “democracy is increasingly challenged as the governance model best suited to deal with growing socio-economic issues.” The report acknowledged that even “in the EU, some of the core requirements for a functioning democracy are impaired.” A democratic impairment manifested in several phenomena like “challenges to the rule of law, and an increasing silent citizenship, e.g. a consistent decrease of electoral turnout in many Member States in both national and European elections, or the growing lack of interest in general democratic life [...] the personalisation of politics, with political leaders considered more important than political parties, [...] polarisation of the political debate and the sense of isolation [...] amplified by mis- and disinformation, group dynamics in social media, or algorithmic bias.”

Social sciences and humanities research is critical for effectively addressing those challenges. While science will provide knowledge, insights and theoretical frameworks, the involvement of stakeholders on the ground (community organisations, policymakers, civil society representatives, among others) is determinant for facilitating the uptake and impact of research results and therefore encouraged in this destination. This collaborative approach ensures that research is based on real-world experiences and needs, leading to more effective and relevant outcomes.

By addressing key societal challenges through this inclusive methodology, the impact of research on citizens’ lives will be enhanced. For instance, promoting gender equality and protecting minority rights are not only academic endeavours but necessities that reinforce social cohesion and justice. Research findings can shape legislation, drive social innovations, and support the development of initiatives that directly benefit communities. Research contributes to the development of democratic systems that are more inclusive, flexible and adaptable to change. By considering a wide range of views and experiences, policies and institutions are better able to address the needs of all citizens, increasing social fairness.

⁹ Political Guidelines for the next European Commission 2024-2029, <https://europa.eu/wywg4P>, p. 23

¹⁰ https://commission.europa.eu/system/files/2023-07/SFR-23_en.pdf

Expected impact:

Proposals for topics under this destination should set out a credible pathway to contributing to the following expected impact of the Horizon Europe Strategic Plan:

- Reinvigorating democratic governance by improving the accountability, transparency, effectiveness and trustworthiness of institutions and policies based on rule of law, and through the expansion of active and inclusive citizens' participation and engagement empowered by the safeguarding of fundamental rights.

The aim of the research investment supporting this impact is to develop a robust evidence base on which to build effective, relevant and sensitive policies that bolster the resilience of democratic systems and protect them from threats.

The expected impact will be achieved by generating new knowledge and understanding, and developing strategies, methods and innovative solutions, as well as policy recommendations, under the following three areas:

1. **GLOBAL CHALLENGES - Fostering democracy and promoting EU values in times of geopolitical shifts and global poly-crisis**, including: effectiveness of science diplomacy as a way to strengthen multilateral cooperation; balancing ethical foreign policy with economic and security interests in foreign countries; disinformation and Foreign Information Manipulation and Interference (FIMI), as a tool of warfare; EU enlargement and neighbourhood policies to better understand the mechanisms to promote democratisation and the attainment of the EU *acquis*, fundamental values and the rule of law.
2. **RESILIENT DEMOCRACIES – Increasing the resilience of democracy in the face of external and internal threats**, including: nature of extremism and drivers of radicalisation, polarisation and hate speech, (such as xenophobia, racism or misogyny); autocratic and anti-democratic tendencies in the EU; violence and conflict in society with a focus on politically motivated violence (incl. antisemitism); balance between protecting free speech and implementing necessary regulation of it; public misconceptions towards EU enlargement.
3. **AGILE INSTITUTIONS & INCLUSIVE SOCIETIES – Modernise democratic institutions and public sector processes for the 21st century**, including: innovative public administration and new ways to guarantee quality and incisiveness of public administration (through an indirectly managed action); trust in governance and the Rule of Law, including independence and efficiency of the judiciary; ecosystem-based approach to public decision- and policymaking, combined with foresight and anticipatory governance.

The destination will seek synergies with other relevant EU programmes, in particular for the uptake of research results and innovative solutions developed under Horizon Europe. Interaction – among others – with the following programmes is encouraged: Digital Europe (DIGITAL), Technical Support Instrument, CERV (Citizens, Equality, Rights and Values),

Erasmus+, ESF+ and Global Europe: Neighbourhood, Development and International Cooperation Instrument.

Applicants are encouraged to consider, where relevant, the services offered by the current and future EU-funded European Research Infrastructures, particularly those in the social sciences and humanities domain¹¹. Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this destination is FAIR (Findable, Accessible, Interoperable and Re-usable).

To maximise the impacts of R&I under this Destination in line with EU priorities, international cooperation will be encouraged whenever relevant in the proposed topics.

Proposals are invited against the following topic(s):

HORIZON-CL2-2025-01-DEMOCRACY-01: Advisory support and network to counter disinformation and foreign information manipulation and interference (FIMI)

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>If eligible for funding, legal entities established in non-associated third countries may exceptionally participate in this Coordination and support action as a beneficiary or affiliated entity.</p>
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply:

¹¹ For a full list see <https://ri-portfolio.esfri.eu/ri-portfolio/table>. In the social sciences domain, see for example: CESSDA - Consortium of European Social Science Data Archives (<https://www.cessda.eu/>), ESS – European Social Survey (<https://www.europeansocialsurvey.org/>), SHARE - Survey of Health, Ageing and Retirement in Europe (<https://www.share-eric.eu/>) or the European Holocaust Research Infrastructure (<https://ehri-project.eu/>)

	The granting authority can fund a maximum of one project.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹².</p>

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- EU institutions and national decision-makers, practitioners in relevant sectors, civil society organisations and other societal actors have an increased understanding of the validity of theoretical models, the possibilities to implement recommendations, toolkits, methodologies and other solutions to prevent and counter FIMI and related disinformation actions.
- Practitioners in relevant sectors, civil society organisations and other societal actors involved in the design and implementation of measures to prevent and counter FIMI, including disinformation in different sectors have access to a network and tailor-made advisory support.
- EU institutions and national decision-makers are equipped with science-based tools and evidence-based policy recommendations to proactively conceive, implement, and innovate measures to prevent and counter FIMI and related disinformation actions, and other actions instigated by third countries.

In addition, projects should contribute to at least one of the following expected outcomes:

- Frameworks and approaches that advance common understanding and facilitate collaboration to address and counter disinformation and FIMI, such as D-RAIL¹³ or the DISARM framework¹⁴, are enhanced, improved or complemented, to foster their adoption by a wider audience of professionals.
- Practitioners in relevant sectors (such as education, security, defence, transport, foreign relations, ICT, media, etc.), civil society organisations and other societal actors have better knowledge and increased awareness of the challenges posed by disinformation and FIMI and of their pervasiveness in their respective sectors.

¹² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹³ <https://www.disinfo.eu/publications/directing-responses-against-illicit-influence-operations-d-rail>

¹⁴ <https://www.disarm.foundation/framework>

- EU institutions and national decision-makers, practitioners in relevant sectors, civil society organisations and other societal actors have evidence of the ways of working and impact of new technologies (AI, Big Data, etc.) in the creation and dissemination of disinformation content and FIMI activities and have new tools and methods to design and implement appropriate initiatives to address these phenomena.

Citizens, civil society organisations and other societal actors have increased capacities to identify and counter disinformation content and FIMI and related disinformation actions.

Scope: Hybrid threats, and more specifically the phenomena of disinformation and FIMI¹⁵ are a growing danger for democracy, human rights, social cohesion, and European security. In recent years, the EU has developed and started to implement several strategies and numerous projects to counter disinformation and FIMI.

The aim of this action is to bring to society the benefits from previously EU-funded research (including SSH research) dealing with disinformation and FIMI in the field of democracy and governance be it in Horizon 2020 and Horizon Europe or other relevant programmes (such as Citizens, Equality, Rights and Values, Digital Europe, and Global Europe). For this, proposals should build on the rich stock of actionable recommendations, knowledge, toolkits, educational material, and scientific methods etc. developed in particular by the several Horizon 2020 and Horizon Europe projects on disinformation and FIMI and make them accessible to a wider audience (i.e., professionals in various sectors, including media, education, security, defence, transport, foreign relations, ICT, etc.).

Several projects¹⁶ funded under Horizon 2020 have aimed to conceive and implement solutions that help professionals spot and debunk mis- and disinformation and information manipulation or address hybrid threats. Proposals should indicate which Horizon 2020 projects are considered sources of research results relevant to the activities to be carried out and are encouraged to seek collaboration with these research teams. Recent projects funded under Horizon Europe investigate specifically the FIMI phenomenon. Proposals should build on, and seek cooperation with, past and on-going EU-funded projects,¹⁷ as well as EU-led initiatives, such as the One-Stop-Shop for Tackling R&I Foreign Interference. Proposals should indicate which additional Horizon Europe projects they would build on, should there be more than those funded under the mentioned topics.

Proposals should further develop frameworks already in use by FIMI and disinformation practitioners (such as the DISARM Framework). Proposals should also consider the work

¹⁵ See: https://www.eeas.europa.eu/eeas/tackling-disinformation-foreign-information-manipulation-interference_en

¹⁶ Such as EU-HYBNET (<https://cordis.europa.eu/project/id/883054>).

¹⁷ In particular, projects funded under HORIZON-CL2-2023-DEMOCRACY-01-01: Detecting, analysing and countering foreign information manipulation and interference; HORIZON-CL2-2023-DEMOCRACY-01-02: Developing a better understanding of information suppression by state authorities as an example of foreign information manipulation and interference; HORIZON-CL3-2021-FCT-01-03: Disinformation and fake news are combated and trust in the digital world is raised.

done by the EDMO Hubs¹⁸ and find ways to integrate these results into the advisory support and design actions to disseminate Hubs.

The capacity-building activities and advisory support should be addressed to a wide range of stakeholders and potential end-users, including non-scientific and non-academic actors, such as public bodies, NGOs, fact-checkers, civil society organisations, policymakers, educational bodies, law practitioners, or other potential end-users of the research results. The involvement of one or more of these categories of stakeholders is required to test and take up the research results and to explore their readiness to be implemented and replicated. Those activities and support could also involve signatories of the Code of Conduct on Disinformation, media companies, public and private broadcasters, online news platforms, and digital services object of the European Media Freedom Act (EMFA), and other private entities, such as providers of intermediaries' services under the Digital Services Act (DSA). The involvement of these categories of stakeholders is required to provide researchers with access to data necessary to undertake research and access to platform data on the spread and behaviour of disinformation online.

With the emergence of new technologies (especially those based on [generative] Artificial Intelligence and the use of Big Data), the actors promoting disinformation and FIMI activities have significantly increased their capacity to act, they are able to develop more targeted content across a broader spectrum of sectors, and they are more effective than disinformation approaches based for instance on bot farms¹⁹. AI could also be used to develop new disinformation detection technologies, while addressing the ethical and legal challenges implied.

Proposals should identify gaps in research, in particular with regards to access to data, as well as other obstacles to large-scale scientific inquiry of disinformation and FIMI threats. They should identify challenges and opportunities based on an analysis of ongoing and past research and innovation projects, particularly those offered by generative Artificial Intelligence in the context of generation, dissemination, detection and debunking of disinformation and FIMI activities more broadly. The proposals should make concrete recommendations on how the gaps in research could be filled.

Proposals are encouraged to also address the issue of identity-based disinformation and FIMI targeting LGBTIQ people.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

¹⁸ <https://edmo.eu/about-us/edmo-hubs/>

¹⁹ See: <https://edmo.eu/edmo-news/new-white-paper-on-generative-ai-and-disinformation-recent-advances-challenges-and-opportunities/>

HORIZON-CL2-2025-01-DEMOCRACY-02: Fostering the consolidation of European science diplomacy

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 2.50 and 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If eligible for funding, legal entities established in non-associated third countries may exceptionally participate in this Coordination and support action as a beneficiary or affiliated entity.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁰</p>

Expected Outcome: Building on the recommendations of the EU Science Diplomacy Working Groups²¹, the project should contribute to all of the following expected outcomes:

- EU and national policymakers as well as researchers obtain a taxonomy of European science diplomacy which maps the relevant players, including from academia, policymaking, diplomacy, civil society, and business, and have an overview of the science diplomacy ecosystems in the EU and the existing capacities, infrastructures,

²⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²¹ <https://op.europa.eu/en/publication-detail/-/publication/4b319f3d-e9ff-11ef-b5e9-01aa75ed71a1>

networks (including diaspora and alumni networks), training activities, strategies, and publications at EU and national level. This should also include a mapping of science diplomacy strategies of third countries to inform EU responses.

- Design and launch a European Science Diplomacy Platform as a community of research and practice providing an impartial space for interaction and resources for institutional capacity building, knowledge sharing and scaling up of best practices, involving the key players in European science diplomacy, from both the EU and national levels, liaising also with European scientists in the diaspora and alumni of European mobility schemes, and creating links with existing platforms.
- Building on the activities of existing mechanisms such as the Marie Skłodowska-Curie Actions (MSCA), ERC, COST, EURAXESS, the European Universities initiative, the European Diplomatic Academy, and relevant programmes at national level, schemes, competence frameworks and curricula for training, capacity-building, and mutual learning in European science diplomacy, are developed, paying particular attention to the needs of science counsellors and other diplomats dealing with matters that rely heavily on scientific expertise.

Scope: Not least thanks to the Horizon 2020 cluster on science diplomacy, which funded three projects in 2016-2022²², a vibrant community of European science diplomacy scholars and practitioners has emerged, leading to the development of the EU Science Diplomacy Alliance²³. Further input was delivered by the former Strategic Forum for International S&T Cooperation (SFIC)²⁴, which suggested the development of an EU Science Diplomacy Platform and Roadmap. In addition, a growing number of Member States have adopted national science diplomacy strategies or agendas, or are currently exploring their development, and have strengthened scientific-technological capacities in their Ministries of Foreign Affairs (e.g., establishment of an informal Network of Science Advisors and Science Diplomacy Coordinators in EU Ministries of Foreign Affairs). An increasing number of recent EU policy documents have made explicit or implicit reference to science diplomacy and the need for foreign policy to be based on the best possible evidence. Against the background of a rapidly changing geopolitical and scientific-technological environment, with global competitors using science diplomacy in a much more strategic manner, there is a need to consolidate European science diplomacy efforts and explore synergies to tackle existing vulnerabilities.

Science diplomacy forms an integral part of the Global Approach to Research and Innovation²⁵, the EU's strategy for international cooperation in research and innovation, which prominently advocates that a stronger focus on science and technology in the EU's

²² [Using Science for/in Diplomacy for Addressing Global Challenges \(S4D4C\)](#), [Inventing a Shared Science Diplomacy for Europe \(InsSciDE\)](#), [European Leadership in Cultural, Science and Innovation Diplomacy \(EL-CSID\)](#)

²³ <https://www.science-diplomacy.eu>

²⁴ https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/europe-world/international-cooperation/science-diplomacy/sfic_en

²⁵ https://research-and-innovation.ec.europa.eu/system/files/2021-05/ec_rtd_com2021-252.pdf

foreign and security policies in terms of science diplomacy would help the EU to project soft power and pursue our economic interests and fundamental values more effectively. In its Conclusions on the Global Approach²⁶, the Council called on the Commission and the European External Action Service to develop a European Science Diplomacy Agenda. At the informal Competitiveness Council meeting in July 2023, EU Research Ministers underlined the importance of European science diplomacy action. Consequently, the European Commission organised together with the Spanish Presidency of the Council of the EU the first European Science Diplomacy Conference in Madrid in December 2023 and the launch of EU Science Diplomacy Working Groups to develop recommendations for a potential future European framework for science diplomacy.

Against this background, the Coordination and Support Action will contribute to consolidating the European science diplomacy landscape both in research and in practice. In particular, it should provide, once operational, a mapping of all relevant players, which is still lacking at this point, and establish a European Science Diplomacy Platform²⁷. The added value of such a platform is that it can serve as a “do tank”, bringing together scientists (including from SSH disciplines) and diplomats alike and delivering concrete support for policy needs, such as:

- advising on the use of science diplomacy to help achieving the EU’s foreign and security policy goals (e.g., in the context of Global Gateway²⁸),
- identifying research needs and providing expert knowledge to policymakers and diplomatic services through science advice and science communication, thereby strengthening multilateralism and democratic governance,
- designing methods for assessing the impact of relevant actions,
- exploring synergies with other fields of diplomacy, most notably tech / innovation / digital diplomacy, as well as public diplomacy and culture diplomacy, including the use of arts to communicate science related to global challenges,
- assisting policy dialogues with audiences and stakeholders in third countries as well as international organizations and other multilateral settings, and
- supporting the EU’s science diplomacy outreach to partners world-wide, including to relevant international organizations, such as UNESCO.

In addition, this Coordination and Support Action should explore and develop mechanisms for training, capacity-building, and mutual learning in science diplomacy in a consistent manner, including by exploring the feasibility of science diplomacy fellowship schemes in European and Member State/Associated Countries’ institutions at home and in diplomatic representations abroad.

²⁶ <https://data.consilium.europa.eu/doc/document/ST-12301-2021-INIT/en/pdf>

²⁷ Creating links with existing platforms such as the EU’s [Cultural Relations Platform](#) and the EU [Alumni Platform](#).

²⁸ [Global Gateway - European Commission \(europa.eu\)](#)

Engagement with partners outside the EU is particularly encouraged for this project.

Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-CL2-2025-01-DEMOCRACY-03: Preparing the EU for future enlargement: challenges and opportunities

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The consortium must include at least one entity, as a beneficiary, established in one of the following countries: Albania, Bosnia Herzegovina, Georgia, Kosovo²⁹, Montenegro, North Macedonia, Republic of Moldova, Serbia, Ukraine, or Türkiye.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).³⁰.</p>

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Policymakers and public administrations in each Member State, candidate country, potential candidate country, and at EU institutional level, are provided with thematic

²⁹ This designation is without prejudice to positions on status and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

³⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

insights on lessons learned from previous enlargement processes for the development of future policies with particular attention to democracy, rule of law and governance related topics.

- Societal awareness of the enlargement process is increased both within the Union and in the candidate country(ies), or potential candidate country(ies), through a deeper understanding of the political, social and economic consequences of enlargement versus non-enlargement of the EU.
- EU authorities and public authorities in Member States benefit from better use of existing interactive tools to better inform and promote educational opportunities on enlargement process for citizens in the Union and in the enlargement countries.
- Public's at large involvement in enlargement is enhanced through transparent and participatory processes, leveraging digital tools for broader engagement.

Scope: As stressed in several Commission's communications³¹ and following the granting of the candidate country status to Georgia, Moldova and Ukraine, there is a need to invest more in understanding enlargement priorities, opportunities, and challenges based on the perspective of a EU counting more than 30 Member States. This also means that EU Member States need to be better prepared, while citizens and civil society must gain a better understanding of what enlargement entails.

The proposed research should improve on the one hand, the EU Member States' understanding of the history, political and economic situation of the candidate countries and potential candidates, through socio-historical research, combined with a legal and economic approach (including expertise from relevant SSH disciplines). And, on the other hand, it should support EU citizens and civil society to gain a better understanding on challenges and opportunities related to potential future enlargements of the EU.

Reflecting on previous enlargements, the proposals should provide thematic insights on lessons learned and identify potential similarities with the candidate countries, focusing particularly on democracy, rule of law and governance-related topics.

Adopting a flexible and adaptive approach to enlargement, responsive to geopolitical dynamics and regional challenges, might be necessary. Utilizing foresight and scenario planning can help the EU and the Member States to anticipate future changes and strategically manage the enlargement process. This approach can also consider differentiation within EU governance to build resilient, inclusive, and participatory societies.

A comparative analysis of the detailed terms and conditions of membership in the accession treaties, both regarding terms and conditions issued by Member States and acceding countries

³¹ COM(2024) 146 final <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2024:146:FIN> on "pre-enlargement reforms and policy reviews"; COM(2020) 57 final <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0057> on "Enhancing the accession process - A credible EU perspective for the Western Balkans"; COM(2023) 691 final <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2023:691:FIN> on "New growth plan for the Western Balkans".

upon joining the Union, such as transition periods for the freedom of movement of workers and persons, or the acquisition of real estate, could serve as an interesting case study for candidate countries and other stakeholders involved in this process. Public support and engagement for EU enlargement are crucial but fluctuate largely between Member States and candidate countries. To foster a more inclusive process, it is essential for the proposals to involve citizens early in the enlargement discussions, ensuring transparency and addressing political, economic and social concerns aiming at improving the credibility and acceptance of the enlargement process. The proposals should also address the EU's readiness to enlarge, considering the "enlargement fatigue" and the rise of euroscepticism within the Union and in the candidate countries.

Building concrete knowledge through comparative analysis of the motives of candidate countries to join the EU would be beneficial to observe any similarities and whether these motivations are still present, strengthened or declining in the Member States. Efforts should also be directed towards effective and inclusive communication on the EU integration process and the benefits of enlargement.

Additionally, the proposals should collect evidence on the role of societal dialogues and education in proposing learning approaches to EU integration and enlargement prospect within the Union. This research could combine mutual, social and intercultural learning to support the development of local or regional initiatives by the civil society. These learning approaches could also be based on evidence from formal learning in education institutions or informal learning through civil society initiatives. Proposals should consider citizens' engagement and dialogue, for seeking wider input and encourage youth participation.

To support this goal, the proposals should identify the most effective tools for public administration and policymakers to improve citizens' understanding of the enlargement process, seizing educational opportunities and societal awareness. Utilising emerging digital technologies such as artificial intelligence and social media could be beneficial in meeting the crucial needs to use digital communication.

Pilots should be carried out in at least four EU Member States to assess the effectiveness of these tools, which may also have synergies with people-to-people programmes such as Erasmus+, the European Solidarity Corps, Interreg, or the Civil Society Facility, fostering a common European spirit between EU Member States and candidate countries.

Based on the research, policy recommendations should be developed to promote inclusive strategic communication and citizen engagement on EU integration and values within the Union and in the Member States. These policy recommendations should also explore how to support the reform process of candidate countries and/or learn from their existing reforms regarding Chapters of the Acquis, such as of Chapter 10 (Information Society and Media), Chapter 23 (Judiciary and Fundamental Rights), Chapter 24 (Justice Freedom and Security), and Chapter 34 (Institutions).

Proposals are encouraged to network with and build on previously funded projects under Horizon Europe calls³², Horizon 2020 or other EU programmes, e.g. Global Europe³³ or the Instrument for Pre-accession³⁴. Clustering and cooperation with other selected projects under this topic and other relevant projects are strongly encouraged.

Applicants to this topic are also encouraged to consider the data offered by European Research Infrastructures in the social sciences and humanities domain³⁵.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-CL2-2025-01-DEMOCRACY-04: Open strategic autonomy, economic and research security in EU foreign policy

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ³⁶.</p>

³² In particular HORIZON-CL2-2023-DEMOCRACY-01-08: Political perspectives for the Eastern Neighbourhood and the Western Balkans, HORIZON-CL2-2021-DEMOCRACY-01-04: Democratic politics in the EU's neighbourhood, as well as other relevant projects funded under other clusters and pillars of Horizon Europe.

³³ https://ec.europa.eu/international-partnerships/global-europe-programming_en

³⁴ https://neighbourhood-enlargement.ec.europa.eu/enlargement-policy/overview-instrument-pre-accession-assistance_en

³⁵ For example, CESSDA, the European Social Survey or SHARE.

³⁶ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link:

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- EU institutions, national decision-makers, and practitioners in various relevant fields dispose of consolidated concepts, workable definitions and a robust evidence base for policymaking, regarding open strategic autonomy and economic security - including research security.
- EU institutions and national decision-makers gain a better understanding of how the open strategic autonomy and economic security – including research security – can benefit the EU and its Member States, associated countries, Neighbourhood, and developing countries, and of the impacts of potentially divergent EU and Member States' related policies.
- EU institutions and national decision-makers are provided with policy recommendations on how to enhance open strategic autonomy and economic security – including research security – without harming economic and societal actors in the EU, associated countries, Neighbourhood and developing countries or the geopolitical influence of the EU.
- EU institutions, national decision-makers and researchers (including from SSH disciplines) have a deeper understanding of the drivers of open strategic autonomy and economic security – including research security – in key policy fields and what its historical evolution has been.

Scope: The EU's open strategic autonomy refers to the EU's ability to act autonomously (i.e., without depending on other countries) in strategically important policy areas, linked to both the economic and non-economic spheres. These areas may include energy, research, health, media, technology, defence, food, industry, as well as development cooperation, promotion of democracy and defence and promotion of human rights.

The concept of open strategic autonomy is not new, and its interpretation has changed, producing various legislative and non-legislative initiatives in several areas of key importance for the EU and its Member States. Since 2021, the scope of the EU's open strategic autonomy has been expanded to practically all EU policy areas, including that of democracy and governance, but other similar concepts also emerged. In recent years and since Russia's invasion of Ukraine in February 2022 in particular, progress has been made towards achieving (open) strategic autonomy, although the concept remains clouded by changing terminology.

The European Economic Security Strategy was launched in June 2023³⁷, setting out a framework for robust assessment and management of economic security risks at EU, national and corporate levels. In December 2023, the European Commission's Joint Research Centre (JRC) published a report assessing open strategic autonomy in the innovation and production domains³⁸. It observes that, in addition to pure economic dependencies, the changing

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

³⁷ See: https://ec.europa.eu/commission/presscorner/detail/en/IP_23_3358

³⁸ See: <https://publications.jrc.ec.europa.eu/repository/handle/JRC136359>

geopolitical landscape has increased potential vulnerabilities stemming from international collaboration in research and innovation. In May 2024, the Council adopted a Recommendation on Enhancing Research Security, which aims to keep international cooperation in research and innovation both open and safe by managing risks and building resilience in the R&I sector across Europe.

Against this background, proposals should contribute to conceptual clarity, definition of key concepts and the theoretical framework underpinning these concepts as well as gather evidence for policymaking, including through analysis of the threat landscape. Proposals should analyse the drivers for open strategic autonomy and economic security in various sectors of the European economy, notably the research, innovation and production domains, and map the relevant actors, trends, and risks.

Proposals are encouraged to analyse the correlation between the concepts of open strategic autonomy and economic security, including research security, considering the three pillars of the European Economic Security Strategy: promoting the EU's competitiveness, protecting it from risks to economic security and collaborating with the widest range of countries that share the EU's concerns or interests. Hence, proposals should develop recommendations on how to strike the right balance between being "as open as possible" and "as closed as necessary", taking into consideration also what the implications of greater autonomy / technological sovereignty of the EU and its Member States would mean for economies and populations outside the EU, especially in developing countries.

Proposals are encouraged to assess the proportionality and effectiveness as well as the costs and benefits of policies and measures aiming at open strategic autonomy/technological sovereignty and economic security, including research security, and their implications for the research and innovation sector. This includes analysing interlinkages and tensions with concepts such as open science, academic freedom, research integrity and science diplomacy. Proposals should also analyse the risks and implications of individual Member States not adhering to EU strategic autonomy policies and explore the legal tools available to prevent and address such divergences.

There is a risk that open strategic autonomy ambitions do not consider negative impacts on developing countries, and might weaken multilateralism, cross-border trade, and foreign investment. Moreover, the open strategic autonomy policies could encourage the spread of protectionist policies globally, impacting particularly on developing countries. They could also unintentionally undermine Europe's position as a trade and development partner in developing countries. The latter could build ties with other global players, potentially increasing their dependence on them for resource extraction, trade, infrastructure development, and other key areas. Therefore, proposals should also consider what the implications of greater autonomy or sovereignty of the EU and its Member States would be for populations outside the EU, and how this could influence the engagement of professionals and organizations active in areas such as development cooperation, promotion of democracy and defence and promotion of human rights.

Proposals are encouraged also to investigate and gather evidence on what policies other international key partners develop in the areas of open strategic autonomy and economic security, including research security, and how these may impact the EU and its Member States. Ideas should be developed indicating how a level playing field in the cooperation with these key partners/geopolitical players could be guaranteed, ensuring that safeguarding measures do not hinder cooperation between partners.

In recent years, many Member States have developed foreign policy guidelines and strategies that incorporate feminist principles and the promotion of respect for minorities. These political developments, alongside academic debates, indicate a growing trend of integrating ethical and feminist principles into diplomatic strategies. Proposals are encouraged to consider such ethical and gender-responsive approaches to foreign policy and the design of open strategic autonomy. Research activities should involve a wide range of stakeholders and societal actors, including non-scientific and non-academic actors, such as public bodies, policymakers, private corporates, industry federations, media organisations, non-governmental organisations, civil society organisations, educational research bodies. Proposals under this call are encouraged to make use of participative methodologies and experimental methods.

Proposals should build on past EU-funded projects, and seek cooperation with on-going ones, addressing issues relating to strategic autonomy. Proposals should indicate which Horizon 2020 projects are considered sources of research results relevant to the activities to be carried out. Research activities could involve the analysis of Important Projects of Common European Interest (IPCEI). Clustering and cooperation with other selected projects under this topic and other relevant projects are strongly encouraged.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-CL2-2025-01-DEMOCRACY-05: Countering and preventing radicalisation, extremism, hate speech and polarisation

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.50 million.
<i>Type of Action</i>	Research and Innovation Actions

<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ³⁹.</p>
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Expected Outcome: Projects should contribute to all of the following expected outcomes:

- EU and national decision makers, researchers (including from SSH disciplines), practitioners, educators, and media organisations are equipped to deliver effective prevention and counter measures on radicalisation, extremism, hate speech, and polarisation, by gaining a comprehensive understanding of the linkages between social and economic inequality, polarisation, radicalisation, and hatred, and by implementing effective recommendations, tools, narratives, methodologies, and other innovative solutions.
- EU institutions and national policymakers gain insights into radicalisation, extremism, and hate speech, including their impact on young people and how youth perceive and engage with information on these phenomena, whether online or offline.
- EU institutions, national decision-makers, and civil society organisations acquire a thorough understanding of the mechanisms driving successful extremist, radical, and hate campaigns, as well as the diverse political environments and their modes of interaction and communication, extending beyond social media and online platforms.

In addition, projects should contribute to at least one of the following expected outcomes:

- Improved understanding of methodologies to effectively map hate ecosystems online through qualitative and quantitative tools, also with a view to supporting the enforcement of existing laws prohibiting racist, xenophobic and misogynistic hate speech, and to protect potential victims.
- Increased understanding of the link between disinformation (including foreign information manipulation and interference FIMI) and hate speech, and radicalisation and extremism, in particular how disinformation and hate campaigns deepen social divisions and create the conditions for radicalisation and extremism.
- Increased understanding of patterns of media consumption by individuals and their use of traditional media vs social media to form their own opinion, the effects of a polarised

³⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

public sphere on the media landscape, including the role of journalists; and the possible developments in the area of citizens'-led media content.

- Increased understanding of the role of traditional media, online media, social media, and artificial intelligence in countering mis- and disinformation and information manipulation, hatred, and the spread of narratives that drive radicalisation, polarisation, and extremism in societies.
- Improved tools and methods to assess the reliability of sources and related meta-tagging systems to map different points of view, as well as other actionable journalistic practices (e.g. forums, citizens' engagement and outreach, communication channels with editorial teams) which have proven effective in improving the quality of debate in the media.
- Increased availability of training tools, materials, and methods for educators and educational organisations to engage with students, enhancing their capacity to provide opportunities to raise awareness and counter hate, extremism and polarisation.

Scope: The phenomena of radicalisation, extremism, incitement to hatred and polarisation are a growing threat to democracy and social cohesion. In recent years, the EU has adopted several strategies to combat racism, antisemitism and xenophobia, as well as to counter hate speech and hate crimes. The EU also has policy tools to respond to all forms of extremism and radicalisation. As recalled by the Joint Communication "No Place for Hate"⁴⁰ of 6 December 2023, these initiatives are even more urgent considering the growth in hate speech and crimes against women and people belonging to vulnerable groups in recent years.

Social media amplifies radicalisation, extremism, hate speech, information manipulation and polarisation. Algorithm-driven personalisation restricts the public sphere and creates "echo chambers" where users primarily engage with like-minded views. This confirmation bias intensifies polarisation, fuels radicalisation, aids in recruiting extremists, and promotes hate speech and crime. Confirmation bias influences both social and traditional media users, as individuals seek information aligning with their beliefs. This trend impacts public discourse, fostering mis- and disinformation and information manipulation including conspiracy theories by limiting exposure to diverse perspectives and distorting perception of reality.

These phenomena arise from distortions in online interactions and media outlet characteristics, especially those that are mostly if not solely disseminated online. In certain member states, online media have become a primary information source alongside, or in the place of, traditional media channels (TV, radio, press), while lacking transparency regarding affiliations with interest groups or foreign influences. Moreover, radicalization and polarisation spread through social networks beyond social media. Therefore, proposals should also consider offline social networks, which include relationships like friendships, kinships, and shared interests, not solely reliant on online platforms.

Research activities should involve a wide range of stakeholders and potential end-users, including non-scientific and non-academic actors, such as, but not limited to, public bodies,

⁴⁰ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023JC0051>

media organisations and outlets, journalists, social media platforms, and representatives from other social networks, non-governmental organisations, civil society organisations, policymakers, educational bodies, other potential end-users of the research results. The involvement of one or more of these categories of stakeholders is required to test and uptake the research results and to explore their readiness to be implemented and replicated. More specifically, research activities are encouraged to involve private entities, such as providers of intermediaries' services under the Digital Services Act (DSA), as their involvement is required to provide researchers with access to data necessary to undertake research and access to platform data on the spread and behaviour of disinformation online.

Proposals are encouraged to explore the following themes (among others): radicalisation and polarisation driven by stereotypes related to gender, religion, or ethnic minorities; the impact of new technologies on the production and dissemination of radicalisation and extremist content; the role of social cohesion, as both radicalisation and democratic participation are significantly influenced by the level of social cohesion within society; linkages between social and economic inequality and radicalisation, extremism, hatred and polarisation⁴¹.

Proposals are encouraged to include historical and comparative analysis, which is crucial for understanding the past uses of hate speech as well as contemporary efforts by radical and extremist organisations to shape narratives. By contextualising these dynamics, proposals can explore the evolution and impacts of these phenomena over time, providing insights into effective strategies for combating them.

Proposals should collaborate with the EU Knowledge Hub on radicalisation prevention (RAN – Radicalisation Awareness Network) to align priorities and share outcomes and should develop advisory services to its members.

Proposals are encouraged to seek collaboration whenever possible with relevant projects selected under previous EU-funded calls, such as HORIZON-CL3-2022-FCT-01-03 - Enhanced fight against the abuse of online gaming culture by extremists. Clustering and cooperation with other selected projects under this topic and other relevant projects are strongly encouraged.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-CL2-2025-01-DEMOCRACY-06: Towards a European research hub on contemporary antisemitism and Jewish life and culture

Call: Culture, Creativity and Inclusive Society - 2025

⁴¹ Research in this field was recommended also by EU citizens in the context of the European Citizens Panel on tackling hatred in society, held in April and May 2024.

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If eligible for funding, legal entities established in non-associated third countries may exceptionally participate in this Coordination and support action as a beneficiary or affiliated entity.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁴².</p>

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- A network of practitioners, including researchers in the field of contemporary antisemitism and research on Jewish life, is established and developed, providing a dynamic space for academic conversations, as well as training and career opportunities.
- Research gaps and relevant research centres to further develop research on contemporary antisemitism and Jewish life in Europe are identified, with a particular focus on regions previously underrepresented in the study of contemporary antisemitism and Jewish life
- Discussion and formulation of methodological standards in the field are facilitated, fostering high quality empirical work.

⁴² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Strategic planning for the field on a Europe-wide level, including a concrete and credible action plan to grow this network into a sustainable research institution, is provided.
- Links between research and policymaking within and for Jewish communities as part of the wider process of nurturing Jewish life in Europe are deepened.

Scope: The first-ever EU strategy on combating antisemitism and fostering Jewish life (2021-2030)⁴³ is an ambitious and comprehensive strategy adopted by the European Commission on 5 October 2021. Generations after the end of the Shoah, antisemitism is worryingly on the rise, in Europe and beyond, especially since the turn of the 21st century⁴⁴.⁴⁵ the Commission calls "for action, for all Europeans, to ensure that Europe is a place where our founding values are enjoyed by everyone, on an equal basis." Antisemitism is incompatible with Europe's core values. It represents a threat not only to Jewish communities and to Jewish life, but to an open and diverse society, to democracy and the European way of life. The European Union is determined to put an end to it.

The third pillar of the Strategy covers "Education, research and Holocaust remembrance" for a Europe that remembers its past and looks into the future through research and education. In this context, an independent expert report was commissioned in 2022 to assess the need to create a research hub on contemporary antisemitism and Jewish life and deliver recommendations⁴⁶.

The goal of this action is to establish a research hub in the shape of a network of researchers on contemporary antisemitism and Jewish life in Europe, bringing together a critical mass of such actors in Europe, from Member States and Associated Countries representing the different parts of Europe. Such a hub should foster the research field's identity and support training and career opportunities for researchers in the field, with a focus on early career researchers. Indeed, the hub's primary objectives should be to help recruit, train and retain expert capacity in research on contemporary antisemitism and Jewish life, and to help ensure that research generated by the field can be used to help formulate policy, at national and European levels.

One of the key expected outcomes is to prepare the sustainability of the hub. That includes exploring and eventually securing further regional, national and European funding, including (but not restricted to) a possible development into a permanent research infrastructure or European partnership. Proposals should demonstrate the capacity of the consortium to secure funding beyond the project's lifetime.

⁴³ Text of the strategy available here: <https://op.europa.eu/s/zXwi>. The first progress report on its implementation can be retrieved here: <https://op.europa.eu/s/zXwh>

⁴⁴ See, for instance, the third survey of the European Union Agency for Fundamental Rights on discrimination and hate crime against Jews, available at: <https://fra.europa.eu/en/project/2023/third-fra-survey-discrimination-and-hate-crime-against-jews>

⁴⁵ https://commission.europa.eu/document/c60c451c-ccd2-406a-be3a-ef65123f2bb6_en

⁴⁶ [Independent Expert Report "The field of research on contemporary antisemitism and Jewish life - Working towards a European research hub" \(2023\)](#)

In practical terms, the hub should be embedded within an appropriate existing research community– to help manage the practicalities of the work and to ensure optimal synergy with the field as it is currently constructed. It should provide opportunities for members to meet in person (in the shape of conferences, seminars, events etc) across geographical Europe. It should have a governance structure that includes an executive board comprised of leading research and policy specialists in the field, a permanent professional secretariat, and be supported by professionals in the areas of social research and policy, training, event management and communications. The hub should have a strong online presence to support its objectives, which should be focused on promoting the field and drawing in students, researchers and policymakers who have an interest in it.

In the long term (5 to 10 years), the hub is expected to contribute to stimulating interest in the field and attracting talents at all career stages. Among possible actions, it could oversee an internship programme for postgraduate researchers and/or start a summer school program. It is also encouraged that it builds a programme to help establish and distribute research grants for PhDs in contemporary antisemitism and in Jewish life, as well as smaller training grants for researchers at all levels to develop methodological, policy development and knowledge transfer expertise.

For more senior scholars, the hub is expected, also in the long term, to help create new academic positions focused exclusively on contemporary antisemitism and on specific aspects of European Jewish life (history, sociology, education, literary/media studies, demography, culture, heritage, etc.) and to provide the space for these position-holders to network together, in order to increase the impact of the research. In order to improve retention and growth in the field, the hub should establish (in the long term) at least one annual prize for an outstanding established scholar in the field and for an early career researcher, to help give prominence to the field and encourage new and existing research specialists. In addition, the hub could for instance, in the long term, work with major foundations operating in countering antisemitism and in fostering European Jewish life, promote initiatives that help make existing field research accessible to researchers and policymakers, and offer grants to Jewish community organisations in Europe to fund specific research projects.

The hub should act as an interface between research (including SSH disciplines) and policy. Consequently, it should organise at least one international conference gathering researchers, community leaders and policymakers. It is strongly encouraged to set up an annual conference that should continue running beyond the end of this action. In addition, it should publish annual reports summarizing the new research and research trends in the field in a format accessible and useful to policymakers.

Given the global dimension of antisemitism, international cooperation is encouraged.

Applicants to this topic are encouraged to consider the data offered by European Research Infrastructures in the social sciences and humanities domain, in particular EHRI (European Holocaust Research Infrastructure)⁴⁷.

Given the level of ambition of the goals to be achieved, the project should have a minimum duration of 36 months.

HORIZON-CL2-2025-01-DEMOCRACY-07: The autocratic appeal: nature, drivers and strategies

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁴⁸ .

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Policymakers, public authorities and citizens at large are equipped with updated and exploitable scientific knowledge (including through SSH disciplines and fields) and understanding of the increasing autocratic tendencies, also in established democracies, including digital authoritarianism and erosion of human rights, as well as of the factors contributing to the rise of these tendencies (including the spread of disinformation in the public sphere, public disparagement of the rule of law, excessive use of police force, demonization of political opposition...).

⁴⁷ <https://www.ehri-project.eu/>

⁴⁸ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Public authorities, journalists and publics alike are provided with methods and tools capable of a) early warning and characterisation of autocratic tendencies, their drivers and strategies; and b) identifying tactics for resisting and combating them.
- Relevant actors (democratic governments, media, civil society organisations) are enabled to take more informed decisions when engaging and dealing with autocracies.

Scope: In many parts of the world, democracies are under attack. Reports and indicators⁴⁹ confirm that we are in an ongoing wave of autocratisation, with the number of autocracies increasing steadily since around the turn of the century. Instead of the announced “end of history” through the triumph of the liberal democratic order, authoritarianism seems to have gained appeal while the democratisation wave rolls back. The ongoing invasion of a democratic European country by an authoritarian regime is just one token, and consequence, of the current autocratisation wave.

How does autocracy work in the twenty-first century? Why does authoritarianism continue to spread, not only as an alternative to, but also within liberal democracy, where populist leaders frequently deploy authoritarian tactics and practices, weakening and eroding the rule of law from the inside, while continuing to gain strength and popularity? The growing acceptance of autocratic approaches in well-functioning established democracies is an under-researched phenomenon, and therefore scientific knowledge and understanding of those tendencies could contribute to the development of tools to counteract them. Social and psychological aspects, as well as philosophical and historical dimensions, will need to be considered for such an analysis. Historical experiences with autocratic regimes can shed light on commonalities and differences, so that the lessons from the past underpin current analysis and responses.

Resistance against autocratisation requires also further investigation. While not overlooking structural pre-conditions, patterns of autocratisation, as well as the motivations and strategies used by authoritarian actors, the research to be funded should also look at the actors resisting autocratisation and their strategies, investigating the modalities, actors and patterns of resistance against processes of autocratisation, so as to generate updated and exploitable scientific knowledge on this field. Could media literacy, culture, creativity and arts, for instance, play a role in stemming autocratic tendencies⁵⁰? What role is left to LGBTIQ people and religious, migrant or ethnic minorities, usually targeted by autocrats and populist leaders, in the resistance playbook against autocracies? Could the heteronormative and whitewashing activities of autocracies, visible in different domains such as culture and arts, entertainment industry, tourism or sports, be also resisted and counteracted?

Particularly striking, among those strategies to distract from persistent authoritarian practices, is the adoption of gender-equality reforms by some autocracies to boost their international

⁴⁹ For instance, those from the annual Democracy Reports published by the Varieties of Democracy Institute.

⁵⁰ The Annex to the Council Resolution on the EU Work Plan for Culture 2023-2026 (2022/C 466/01) states for instance that “cultural co-creation can authentically underpin and credibly communicate our European values, including artistic liberties and cultural rights, in large parts of the world, and thus help contain the reach of authoritarian systems.”

image. While increased autocracy and anti-democratic tendencies go hand in hand with the global setback on gender equality and sexual and reproductive health and rights, proposals should not overlook the causes and consequences of autocracies' pursuit of gender equality. This will shed light on the overall patterns and drivers of autocracies in the twenty-first century.

The resistance against autocratisation tendencies has also moved into the digital realm, in order to counteract the “digital authoritarianism”⁵¹ to which authoritarian and authoritarian-leaning leaders have resorted to. In the digital age, authoritarian power is built and sustained in transnational and globalized configurations that involve state and non-state actors, cutting across regime types. Via online censorship, internet shutdowns, digital surveillance and online disinformation and information manipulation, aspiring autocrats try to silence and disable access to information. Proposals should aim at disentangling the actor configurations engaged in digital authoritarian practices and investigate how these practices fit within the larger authoritarian playbook. In parallel, they should also focus on the challenges brought by resistance to digital authoritarianism, such as protests and investigative research and advocacy, enriching the analysis of the resistance playbook.

Proposals should investigate how to effectively protect democracies from autocratic tendencies and narratives. What means and strategies for protection are at the disposal of different stakeholders (public authorities, civil society organisations, media, citizens)? How can autocratic reforms be reversed and overcome without resorting to anti-democratic means (e.g. party bans, presidential executive orders, censoring) nor inducing large protests leading to increased polarisation?

Proposals could also look into the interrelations between the phenomena of science scepticism and science-denial, distrust in democracies and the autocratic appeal. Proposals should adopt a multidisciplinary, and actor-based, approach, integrating fields such as political science, law, sociology, philosophy, psychology, media and digital studies, gender studies, and history. Proposals should engage citizens, civil society organisations etc. in the development of their activities to ensure calibration and uptake.

The rise of autocracies and populisms in Europe is not an isolated phenomenon and needs to be looked at within a global context. Therefore, international cooperation is encouraged.

Proposals are encouraged to seek collaboration whenever possible with relevant projects selected under previous EU-funded calls, such as HORIZON-CL2-2022-DEMOCRACY-01-05, under Horizon Europe, or GOVERNANCE-03-2018, SU-GOVERNANCE-09-2020 and SU-GOVERNANCE-11-2018, under Horizon 2020. Clustering and cooperation with other selected projects under this topic and other relevant projects are strongly encouraged.

⁵¹ Understood as the practices that rely on digital technologies to prevent critical debate and accountability demands to powerholders by disrupting information flows and free expression and/or by using digital technologies to surveil citizens, activists, civil society organisations.

HORIZON-CL2-2025-01-DEMOCRACY-08: Economic inequalities and their impact on democracy

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁵².</p>

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Enhanced understanding of the interplay between economic inequalities and attitudes towards democracies, achieved by adopting an intersectional perspective across local, national, and transnational levels and acknowledging varying territorial contexts.
- Deeper insights into economic inequalities, including citizens' own perceptions of such inequalities, across diverse demographic groups, and their impact on public participation, the shaping of attitudes for instance towards women's and minorities' rights, as well as trust in democratic processes.
- Enhanced policymakers' awareness through evidence-based policy recommendations on the relationship between economic inequalities and attitudes towards democracy, bridging research and policy by presenting data and potential solutions to foster informed discussion and adoption of targeted measures.
- Existing data are used effectively, and new data avenues are explored to better understand and address the impacts of economic inequalities across diverse demographic

⁵² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

groups, as well as citizen's own perceptions of these inequalities, on democratic participation and trust in democratic institutions.

- Novel and intersectional approaches to enhance understanding of and participation in democratic processes among economically vulnerable populations, including low- or no-income individuals, and those (at risk of) experiencing downward mobility from the middle class, integrating factors associated with social mobility and individual characteristics such as age, sex, gender, racial or ethnic origin, religion, or belief, and disability.

Scope: Economic inequalities, encompassing wealth and income inequalities (e.g., in the form of money, financial assets, or real estate), pose a significant challenge to democratic societies. Over the past decades, while between-country inequality has generally decreased, within-country inequality has risen in numerous countries as global economic growth has not been evenly distributed. This widening gap in wealth has exacerbated political polarisation and fuelled distrust in democratic institutions worldwide. These trends not only suggest correlations between these phenomena but also threaten core democratic principles such as social justice, inclusion, and equal participation and representation. For instance, extremist parties often gain traction when governments fail to protect those disadvantaged by economic changes. Research indicates that governmental shortcomings in protecting those marginalised by structural economic shifts (e.g., cuts to social security entitlements, public investment and/or tax increase) fuel the roots of populism. Understanding this cycle and the complex relationship between economic inequality and democracy is key for a functioning democratic society. Proposals are encouraged to look at the efficiency and effectiveness of public policies in addressing inequalities. For instance, examining the gap between the design and implementation phases of policies aimed at reducing economic inequalities can help better understand their impact on democracy.

Historically, economic disparities have sometimes revitalised public participation and political engagement in various forms, such as trade unions, civic involvement, and political parties. This contrasts with contemporary trends where economic inequalities often correlate with disinterest or even rejection of democracy. Hence, there is a pressing need for SSH research to delve into why, how, and to what extent economic inequalities can undermine trust in democracy and broader societal structures, and how to counteract these trends. Proposals should consider diverse territorial contexts, moving beyond urban/rural dichotomies, and explore strategies to bolster democracies in these different contexts.

Moreover, research has shown that economic inequalities, when assessed solely through economic indicators, fail to provide a comprehensive understanding of their impact on democracy. Citizens' perceptions of economic inequalities appear to play a central role in shaping attitudes towards democratic processes and institutions. These perceptions are often exacerbated by dichotomies such as rich/poor, rural/urban, employed/unemployed, educated/uneducated, and native/immigrant. There is a lack of comparative work including citizens' perceptions, particularly through an intersectional and intergenerational lens.

Therefore, research proposals should consider perceived inequalities as an integral part of the research framework.

Key research questions revolve around the intersection and impact of income and wealth inequalities on democratic practices. This involves exploring, for instance:

- How do income and wealth inequalities across different geographic and territorial areas influence policy preferences of different social and age groups, notably political polarisation, voter turnout, and trust in democratic institutions and processes.
- How perceived economic inequalities (in contrast to economic inequalities measured by quantitative indicators) influence trust and participation in democratic processes.
- How do economic inequalities intersect with social class, racial or ethnic origin, religion or belief, sex, gender, age, disability, and citizenship/nationality in different geographic areas, and what is the cumulative impact on democratic practices.
- What role do local media and community networks play in shaping perceptions of economic inequality across different regions, and how do these perceptions impact democratic engagement.
- How does geographic mobility (e.g., inter-city, rural-to-urban or vice-versa, national, international, temporary, permanent) influence the transmission of economic inequalities, and how do these processes affect participation and trust in democratic institutions.
- What strategies could address varying levels of civic engagement among people and communities from different income brackets and levels of wealth.

The funded research should also generate knowledge on intergenerational transfers, that is, inheritances and inter-vivos gifts, (perceived) inequalities, and their impact on democracy: how do these intergenerational transfers influence wealth inequality, and thus, in line with the main subject of this call, how do they impact democracy, for instance in terms of participation or trust in institutions?

When exploring economic inequalities, proposals should consider at least three additional intersecting dimensions of inequalities alongside economic ones, such as sex, gender, disability, social class, religion or belief, age, and racial or ethnic origins. For example, recent research across all EU Member States reveals that young men residing in regions marked by rising unemployment and perceived inequities in public institutions are inclined to view democratic principles like gender equality as challenges to their interests. Understanding these dynamics is crucial for addressing how economic inequalities intersect with democratic values and social attitudes.

Proposals are encouraged to involve diverse disciplinary perspectives, including but not limited to economics, political economy, political science, public administration, history, (political) sociology, (social) psychology, gender studies, and public policy. Approaches that

combine social science theories with data science techniques or incorporate novel mixed methodologies are encouraged.

Proposals should involve a diverse array of stakeholders across diverse demographic groups - encompassing different age groups, genders, minority communities, persons with disabilities, and socio-economically disadvantaged populations, including representatives from trade unions, civil society organisations, social welfare bodies, and (local) government representatives.

Applicants to this topic are encouraged to make use of the data provided by European Research Infrastructures in the social sciences and humanities domain, particularly CESSDA, the European Social Survey or SHARE.⁵³ Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

Cooperation should be sought with the Community of democracy practitioners and researchers funded under HORIZON-CL2-2024-DEMOCRACY-01-12. Moreover, proposals should build on the results of other EU projects, including the one funded under H2020-SC6-REV-INEQUAL-05-2016 - Inequalities in the EU and their consequences for democracy, social cohesion, and inclusion.

It is encouraged that proposals also exploit potential complementarities with projects funded under the following H2020 topics: REV-INEQUAL-07-2016: Spatial justice, social cohesion, and territorial inequalities; GOVERNANCE-04-2019 – Enhancing social rights and EU citizenship, and, under the following Horizon Europe topics: TRANSFORMATIONS-03-2018-2019: Innovative solutions for inclusive and sustainable urban environments; and TRANSFORMATIONS-22-2020: Enhancing access and uptake of education to reverse inequalities, as well as with Horizon Europe projects funded under HORIZON-CL2-2022-DEMOCRACY-01-03: The impact of inequalities on democracy and HORIZON-CL2-2023-DEMOCRACY-01-07: Intersectionality and equality in deliberative and participatory democratic spaces.

HORIZON-CL2-2025-01-DEMOCRACY-09: Fighting against disinformation while ensuring the right to freedom of expression

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and

⁵³ <https://www.cessda.eu/>, <https://www.europeansocialsurvey.org/> and <https://share-eric.eu/>

	selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁵⁴.</p>

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- EU institutions, national decision-makers, practitioners in relevant sectors, civil society organisations and other societal actors are better equipped to confront and prevent different forms of mis- and disinformation and information manipulation, while protecting and respecting the freedom of expression and academic freedom.
- EU institutions and national decision-makers have a better understanding of the categories of stakeholders opposing policies and initiatives aimed at combating disinformation and information manipulation, including understanding the drivers behind their narratives, and are better equipped to engage with them.
- EU institutions and national decision-makers understand how digital media shapes public opinion and regulate it without compromising citizens' rights to information, media freedom, privacy and data protection, and protection from harm.

In addition, projects should contribute to at least one of the following expected outcomes:

- Media, education and security practitioners are increasingly knowledgeable about tools and legal remedies to counteract the narratives of those opposing policies and initiatives designed to combat disinformation, and to recognise and counter their drivers.
- EU institutions and national decision-makers have a better understanding of the role of independent media and the role and importance of “media dissemination hubs” and professional “mediators” who facilitate citizens’ access to professionally produced content and analyse the crucial aspect of access to information (such as availability, accessibility, affordability, comprehensibility, transparency, inclusivity, privacy and data protection, and security).

⁵⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- EU institutions, national decision-makers, and practitioners in the media sector have a better understanding of astroturfing, its use in spreading mis- and disinformation and information manipulation, and are equipped with tools and policy recommendations to recognize and counter this phenomenon.
- EU institutions, national decision-makers, practitioners in the media sector, and other relevant societal actors have adequate educational materials to understand how to design and implement initiatives to combat mis- and disinformation and information manipulation without harming freedom of expression.

Scope: Mis- and disinformation and information manipulation can thwart political and societal responses to external challenges, such as climate change, public health, or migration. Solutions to such challenges, to be successful, must be based on evidence.

Freedom of expression is a fundamental human right that involves the right to hold and express one's opinions, as well as the right to receive and impart information and ideas, without prior authorization (censorship) or other forms of interference from the government or any other form of public authority. Therefore, freedom of expression is crucial to democracy and a key value of the European project, and it is closely linked to the role of the independent (news) media, a key pillar for checks and balances in a democratic system⁵⁵.

Proposals should investigate how the functioning of the media systems (in particular the data-driven information systems, that use data as a core component of their operation, decision-making processes, and overall functionality) favours disinformation, including gendered disinformation and anti LGBTIQ rhetoric, by creating an optimal environment for its creation, diffusion and proliferation.

Proposals are encouraged to look into the market incentives for media that promote mis- and disinformation and information manipulation, such as decline in viewers and incentives to focus on content that promotes engagement over factuality. This trend is driven by the need to catch audience attention in a competitive media landscape, which often prioritizes sensationalism and emotional reactions over accuracy.

Proposals should also explore how regulations aimed at countering disinformation can be conceived in compliance with citizens' fundamental rights, such as the right to freedom of expression, and preserving independent and pluralistic news media.

Proposals should investigate how to develop a diverse and healthy online (news) media sphere, through the design and management of trust indicators and comparison between facts and opinions on social media platforms, browsers, and websites, to help citizens, particularly children and youth, distinguish content produced with journalistic standards from non-sourced content and opinions. Such investigation should consider existing initiatives such as browser

⁵⁵ Article 11 of the European Charter of Fundamental Rights and article 19 of the Universal Declaration of Human Rights provide the guiding definitions of this right, which encompasses also the freedom of artistic expression: <https://fra.europa.eu/en/eu-charter/article/11-freedom-expression-and-information> and <https://www.un.org/en/about-us/universal-declaration-of-human-rights>

plugins and journalism trust indicators and should be developed/tested with media organisations. Therefore, research activities should involve media organisations and/or media practitioners, as well as information spreaders (individuals or entities that actively disseminate information across various platforms and channels, such as influencers, among others), in consultation and piloting activities to develop theoretical models and policy recommendations. The involvement of one or more of these categories of stakeholders is particularly important to develop innovative methodologies and solutions to counter growing phenomena, such as astroturfing. Astroturfing misleads by impersonating grassroots support through fake accounts or paid actors, amplifying visibility and public influence of misleading media content. It undermines trust in genuine online exchanges, manipulates public opinion, and reinforces echo chambers. This misuse of digital platforms spreads disinformation, undermining online debate integrity.

Proposals are also encouraged to investigate the role of professional “mediators”, i.e. individuals and entities involved in the development, structuring, and dissemination of media content: journalists, editors, producers, and broadcasters. These “mediators” play an important role in understanding and filtering information before it reaches the public and are critical in developing narratives and shaping public discourse. Moreover, proposals are encouraged to investigate the role of “media dissemination hubs”, which distribute information and influence public opinion and public discourse through news, entertainment, and other types of content (such as platforms similar to traditional media, newspapers, TV, radio, and digital channels, namely social media, news websites).

Proposals should develop policy recommendations and methodologies for how to define and provide legal safeguards for protecting open civic discourse in the face of, but not limited to, Holocaust denial, hate speech or incitement to violence.

Proposals should build on past EU-funded projects, and seek cooperation with on-going ones, as well as plan to exploit potential complementarities with project(s) funded under HORIZON-CL2-2022-DEMOCRACY-01-05 — Evolution of political extremism and its influence on contemporary social and political dialogue; HORIZON-CL2-2022-DEMOCRACY-01-06: Media for democracy – democratic media; HORIZON-CL2-2022-DEMOCRACY-01-07: Politics and the impact of online social networks and new media; HORIZON-CL3-2021-FCT-01-03: Disinformation and fake news are combated and trust in the digital world is raised. Clustering and cooperation with other selected projects under this topic and other relevant projects are strongly encouraged.

Research activities should involve a wide range of stakeholders and societal actors, including non-scientific and non-academic ones, such as, but not limited to public bodies, policymakers, private corporates, media organisations, non-governmental organisations, civil society organisations, fact-checkers, educational bodies, education and security practitioners, libraries and other cultural heritage institutions. The latter, with their extensive collections - including newspaper archives and web archives from recent decades - can provide valuable historical insights and help study the evolution of disinformation practices over time. Proposals are encouraged to make use of participative methodologies and experimental methods.

Research activities should also involve entities which are signatories of the Code of Practice on Disinformation, and entities which are subject to the Digital Services Act (DSA) and to the European Media Freedom Act (EMFA).

Research activities could also involve signatories of the Code of Conduct on Disinformation, media companies, public and private broadcasters, online news platforms, and digital services object of the European Media Freedom Act (EMFA), and other private entities, such as providers of intermediaries' services under the Digital Services Act (DSA).

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-CL2-2025-01-DEMOCRACY-10: The role of civic and citizenship education for strengthening civic and democratic participation and support for common European values

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁵⁶ .
<i>Eligibility and admissibility conditions</i>	The conditions are described in General Annex B. The following additional eligibility criteria apply: In order to achieve the expected outcomes, consortia must include, as

⁵⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

	beneficiaries or affiliated entities, (i) at least one secondary or higher education establishment, or public body with the capacity to roll out curricula, or public body in charge of teacher education and training; and (ii) at least one civil society organisation.
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Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Policymakers, education and training institutions, and educators have a better understanding of the impactful learning, teaching and assessment of citizenship education (underpinned by SSH research and evidence), including formal or formal and non-formal learning.
- Policymakers, education and training institutions, and educators gain a sound understanding of the impact of citizenship education related formal or non-formal learning on young people's (aged 15-29) civic and democratic engagement (through different forms of community and political engagement), including young people from disadvantaged backgrounds, and considering gender-specific barriers and opportunities.
- Policymakers, education and training institutions, and educators gain a sound understanding of effective collaborative mechanisms between different actors in formal and/or non-formal education sectors in delivering effective citizenship education.
- Policymakers, education and training institutions, and educators are more aware of and can roll out competence-based, transformational (fostering critical thinking and personal development) and action-oriented (fostering active civic engagement and democratic participation) pedagogical approaches to citizenship education, including innovative learning methodologies.

Scope: Education should equip young people with competences for their personal, social, professional as well as civic engagement and development, enabling them to contribute to our democracies, now and in the future, by shaping active, engaged and creative citizens who are aware of their shared values and able to improve their living environment, as recalled in the 2023 Council conclusions on the contribution of education and training to strengthening common European values and democratic citizenship⁵⁷. In the current context of growing social concerns and political polarisation, as well as in some cases insufficient engagement of young people in democratic life, we need effective educational and training tools to increase and nurture civic engagement and democratic participation and trust in democratic processes. How can different types of citizenship education (including combining formal education with non-formal or informal learning) increase the level of democratic knowledge, and encourage young people to become more involved in their communities and in democratic decision-making?

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[Council conclusions on the contribution of education and training to strengthening common European values and democratic citizenship](#)

This involves developing citizenship competence, in line with the 2018 Council Recommendation on key competences for lifelong learning⁵⁸, and includes, for example, building knowledge and understanding of the European common values, of citizens' obligations and responsibilities, developing critical thinking in understanding main contemporary events and history, understanding of social and cultural diversities and how national identities contribute to the European identity, an ability and willingness to constructively communicate and engage with others in common or public interest and in decision-making, as well as supporting equality and diversity, culture of peace and non-violence.

The aim of this topic is twofold. First, to understand and enhance – through innovative methodologies tested and measured by successful projects – young people's civic knowledge (understanding of democratic institutions and processes) and democratic citizenship attitudes, as well as their experiences, willingness, and opportunities to engage in their communities and participate in civic life, fostering a culture of dialogue, democratic debate, and tolerance. Second, to assess the effectiveness of the teaching methods used to promote civic knowledge, attitudes, and engagement, ensuring they contribute to the development of informed and active citizens.

Proposals are expected to consider learning in formal educational settings and can also examine non-formal educational settings (e.g. extra-curricular activities, community service projects, youth clubs etc.). While both formal and non-formal learning are relevant and interesting for the purpose of the topic, they are very different in nature, with some overlap, and would require different research methods and approaches, which can be costly. The focus of research should be on formal education, while research on non-formal education would bring an added value because of the interplay: whether and how formal education actors collaborate with non-formal education actors, for example.

Proposals should address both young people from disadvantaged and from non-disadvantaged backgrounds and should also consider the gendered aspects of young people's engagement, looking at the different barriers and opportunities for young women and men. Proposals should cover ages 15 to 29.

Proposals should also address the following aspects:

- Design, pilot and test methodologies in formal learning, or in formal and non-formal learning, such as pedagogical approaches on transformational and action-oriented learning, aimed at helping to create critically engaged participants in society, civic learning opportunities, measures related to open classroom climate or student co-creation of education institution related policies and processes (democracy-in-action learning environments). Proposals are encouraged to use mixed methods approaches combining qualitative and quantitative (e.g. small, randomized control trials to test the effectiveness of specific interventions) methods. They may include methodologies for direct youth participation in decisions that concern them, for example in school, sport, cultural

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[Council Recommendation on key competences for lifelong learning](#)

activities, public space, any policies in the remit of local administrations. Proposals are expected to pilot innovative methodologies, and not simply to test existing protocols. They are encouraged to include young people in the design of these innovative methodologies and may develop digital gamified pedagogical tools.

- Produce step-by-step explanations for education and training institutions, educators, national education authorities, and policymakers to roll out innovative methodologies in formal and possibly also non-formal learning, designed to create positive effects on levels of civic engagement, a culture of democratic debate, tolerance, and understanding of democratic institutions and processes. To help improve the supply and quality of democratic citizenship education, proposals are expected to develop guidelines on methodology, content and teacher training, a toolbox of pedagogical materials for teachers, and assessment tools to help identify implementation gaps.

The proposed research should also examine what educational tools and approaches need to be in place in formal, or formal and non-formal education, to equip young people for constructive participation in democratic decision-making, understanding of social and cultural diversity, readiness to support inclusive societies, and peaceful conflict resolution. Proposals may also devise (and run) ways to measure the extent to which extending the right to vote to young people aged 16 and 17 has increased their political participation (e.g. voting in elections), and what specific awareness-raising educational accompanying measures were put in place, in those countries where such measures have recently been put in place, focusing on the varying effects across different genders and intersectional demographics.

Proposals may also study where existing models and practices of civic and citizenship education may have failed (could have a negative impact or are simply insufficient) and led to a paucity of civic engagement, and a culture of polarisation rather than debate. This could include, for example, an analysis of large-scale assessments of young people's knowledge and understanding of concepts and issues related to civics and citizenship, in order to build on previous findings in the tested methodologies.

For their contributions to the outcomes of this topic to be successful, applicants must include in their consortia public authorities with the capacity to roll out curricula or institutions in charge of teacher education and training, and/or education and training institutions, in order to better understand the realities faced by those with the capacity to implement the project's findings and design adapted pilots and methodologies, and to facilitate the roll-out of the methodologies successfully tested by the project. There must also be active engagement of civil society in projects as partners, e.g. youth clubs, sports clubs, community projects, or arts and culture organisations. Testing and innovation work packages should be led or co-led by public authorities with the authority to roll out curricula or education methodologies, and/or education and training institutions, and/or educators in formal and non-formal learning.

Proposals should detail how they will develop close involvement of education bodies and practitioners in the field of democracy promotion, and in particular those involved in relevant projects that received support from other EU programmes, e.g. Erasmus+, European Solidarity Corps, CERV, or Global Europe. Proposals should explain how they will establish

connections, find synergies, and build on the work of projects funded under previous Horizon Europe Calls as, for instance:

HORIZON-CL2-2022-DEMOCRACY-01-04: Education for democracy; HORIZON-CL2-2024-DEMOCRACY-01-08: Culture, the arts, and cultural spaces for democratic participation and political expression, online and offline; HORIZON-CL2-2022-DEMOCRACY-02-01: Network for innovative solutions for the future of democracy; HORIZON-CL2-2022-DEMOCRACY-01-03: The impact of inequalities on democracy; HORIZON-CL2-2022-DEMOCRACY-01-08: Representative democracy in flux; and HORIZON-CL2-2022-DEMOCRACY-01-02: The future of democracy and civic participation.

HORIZON-CL2-2025-01-DEMOCRACY-11: Independence of the judiciary as an aspect of rule of law compliance

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁵⁹.</p>

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- EU authorities and public authorities in the Member States have access to comparative research information on the independence, impartiality and integrity of judicial institutions across the EU to ensure the rights to an effective remedy and fair trial and to strengthen accountability in the broad sense.

⁵⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Policymakers and judicial authorities have a better understanding of the functioning of the safeguards for judicial independence in each other's justice systems, also strengthening judicial cooperation between the Member States.
- Policymakers and public administrations in Member States are provided with research on the implementation at national level of international and EU rules and standards to better assess their impact on judicial independence.
- The EU's capacity to proactively promote rule of law, fundamental human rights and democracy is strengthened with a better understanding of the functioning of the safeguards for judicial independence in the Member States, including their context, current legal practice, the statutory framework, leading court cases and major relevant developments with up to date, reliable and comparable information.

Scope: Judicial independence is a principle of EU law, closely linked to the rule of law, the right to a fair trial and effective judicial protection, as guaranteed by the Treaty on European Union and the Charter of Fundamental Rights of the EU.

The EU already benefits from several tools to ensure the respect of the rule of law. These instruments serve to promote the rule of law, prevent rule of law problems from emerging, and respond to them when they materialize.

On the preventive side, one of the tools is the annual EU Justice Scoreboard which has been providing comparable data on the independence, quality, and efficiency of national justice systems since 2013. In addition, the annual European Rule of Law Mechanism, with the annual Rule of Law Report at its centre, has been providing since 2020 a qualitative assessment of significant developments in the areas of justice, anti-corruption, media independence and institutional checks and balances in every Member State⁶⁰, including specific recommendations for all Member States, aiming to prevent challenges to the rule of law from emerging or deepening.

Gaining a better understanding on the implementation of international and EU standards and its impact on judicial independence is crucial to support the EU's capacity to proactively promote rule of law, fundamental human rights, and democracy.

Reflecting on reform activities at national level and the complexity of national justice systems, proposals should contribute to improve the understanding of the functioning of the safeguards for judicial independence in each other's justice systems. This can be achieved with a multidisciplinary research approach (including research in SSH disciplines), complementing the data and analysis gathered through the annual EU Justice Scoreboard and annual Rule of Law Report.

While using a multidisciplinary approach such as a socio-legal approach, proposals should compare and critically assess national frameworks for judicial independence. Special focus should be put on how national rules, covering e.g. the procedure regarding appointments,

⁶⁰ Since 2024, the Rule of Law Report has also been covering selected candidate countries.

promotion and dismissals of judges and members of judicial administration bodies, workload assessment of judges, allocation of cases, disciplinary proceedings, and transfers of judges, work in practice.

Proposals should also contribute to building concrete knowledge on current legal practice, the statutory framework, leading court cases and major relevant developments at national level with up to date, reliable and comparable information in the Member states and in the enlargement countries.

Additionally, a comparative analysis on the independence, impartiality and integrity of judicial institutions across the EU could serve as a case to illustrate the rights to an effective remedy and fair trial, and also to strengthen accountability in the broad sense.

To support this goal, proposals should provide an outline for a comparative analysis of the safeguards for judicial independence in the Member States and, where appropriate, enlargement countries. Proposals should also highlight good practices on the implementation of international and EU rules and standards at national level.

Based on the research on the implementation of international and EU rules and standards at national level, policy recommendations could be developed to reflect on how judicial cooperation between the Member States could be strengthened.

Proposals are encouraged to network with and build on previously funded projects under the Horizon Europe⁶¹, Horizon 2020 or other EU programmes, e.g. Citizen, Equality, Rights and Values, and the Internal Security Fund (ISF)⁶². Clustering and cooperation with other selected projects under this topic and other relevant projects are strongly encouraged.

HORIZON-CL2-2025-01-DEMOCRACY-12: Community of democracy practitioners and researchers

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility</i>	The conditions are described in General Annex B. The following

⁶¹ In particular the projects funded under HORIZON-CL2-2024-DEMOCRACY-01-03: What is the long-term impact of rule of law and other European values on socio-economic outcomes.

⁶² [Citizens, Equality, Rights and Values Programme - European Commission \(europa.eu\)](#) and [Internal Security Fund - European Commission \(europa.eu\)](#)

<i>conditions</i>	<p>exceptions apply:</p> <p>If eligible for funding, legal entities established in non-associated third countries may exceptionally participate in this Coordination and support action as a beneficiary or affiliated entity.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁶³.</p>
<i>Eligibility and admissibility conditions</i>	<p>The conditions are described in General Annex B. The following additional eligibility criteria apply:</p> <p>In order to achieve the expected outcomes, consortia must include, as beneficiaries or affiliated entities, (i) at least one public body with a policy-making role, and (ii) at least one civil society organisation.</p>

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- The networking and capacity-building work of the European network set up under HORIZON-CL2-2022-DEMOCRACY-02-01⁶⁴ is strengthened and augmented.
- Research and innovation communities in the field of democracy and civic deliberation and participation and citizenship education are less fragmented and better networked across Europe.
- Researchers in democracy, including rule of law; practitioners in civic participation and deliberation; communication experts; and public authorities and governments have access to research results, innovative methodologies, and tools in the field of democracy and civic deliberation and participation and citizenship education through networking events, accessible platforms, databases, knowledge repositories, advice and capacity building on enhancing diversity and inclusion, civic participation, civic and citizenship

⁶³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁶⁴ <https://cordis.europa.eu/project/id/101112280>

education and innovative and experimental deliberation processes at all governance levels.

- Public authorities and governments practice democratic innovation, by applying research results, innovative methodologies, and tools in the field of democracy and civic deliberation and participation and citizenship education which have been distilled by the network into useful “how-tos” and trainings for policymakers, public authorities, and governments.
- Policymakers and research funding organisations are provided with proposals for future research agendas in the field of democracy.

Scope: Creating a network for researchers (including from SSH disciplines), policymakers and civil society organisations to collaborate to formulate policy recommendations and to create knowledge-sharing opportunities was the goal of the HORIZON-CL2-2022-DEMOCRACY-02-01 call topic⁶⁵: to support a necessary tool to strengthen and renew European democracy. The goal of this current call topic is to strengthen, augment, and pursue the work of the network⁶⁶ of researchers in democracy together with practitioners of civic participation and deliberation and of citizenship education across Europe, previously set up. This network should contribute to the EU’s future policy to strengthen and renew democracy.

The selected proposal will establish an innovative successor network of democracy research organisations and practitioners of democratic innovation, which will:

- Produce policy recommendations to strengthen and renew democracy in all governance levels and democratic debate in Member States and Associated Countries, drawing on the existing body of knowledge. These recommendations must be accessible, publicly available, and well disseminated including through a central open access repository.
- Help policymakers in the EU and Associated Countries to design civic participation strategies for relevant policy areas, in conjunction with the European Commission’s Competence Centre on Participatory and Deliberative Democracy⁶⁷ as relevant.
- Organise 2 retreats per year for policymakers from EU Member States, Associated Countries and EU institutions, targeting high-level officials, to learn and exchange from experts and peers on democratic strengthening and renewal, and encourage exchange on emerging or persisting challenges and threats to democracy, participation, and civic engagement.
- Design capacity building activities on inclusive participatory and deliberative forms of democracy at different governance levels, including training and knowledge sharing.

⁶⁵ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl2-2022-democracy-02-01>

⁶⁶ <https://nets4dem.eu/>

⁶⁷ https://knowledge4policy.ec.europa.eu/participatory-democracy_en

- Organise at least one conference on democratic innovations gathering researchers, practitioners, education bodies and EU and national policymakers.

Proposals should establish links to and seek complementarities with closely related actions, such as relevant R&I actions funded by Horizon Europe (such as the network established under HORIZON-CL2-2024-DEMOCRACY-01-12 ⁶⁸) or synergies with the Citizens Equalities Rights and Values programme (CERV)⁶⁹. Specifically, it must build on, rather than repeat or reproduce, the work produced by Nets4Dem under HORIZON-CL2-2022-DEMOCRACY-02-01. Proposals are also invited to build links with global communities addressing democracy.

The project should have a minimum duration of 36 months.

⁶⁸ See: <https://cordis.europa.eu/project/id/101178637>

⁶⁹ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/cerv>

actions will also assess the role intangible cultural heritage plays for fostering societal resilience amidst societal challenges.

DIGITAL: The digital transition promises enormous opportunities for Europe's cultural heritage and cultural and creative industries but also implies serious challenges. It is important to ensure that, throughout the digital transition, EU citizens enjoy cultural heritage and contribute to its interpretation and enrichment.

R&I actions will focus on how the benefits of digitised and digital cultural heritage may be exploited, reaping the benefits while avoiding the pitfalls. A particular focus will be on supporting the European Collaborative Cloud for Cultural Heritage (ECCCH), as well as on exploring challenges and opportunities of digital technologies such as artificial intelligence for culture, creativity and cultural heritage, and the ways cultural and creative industries can successfully engage with such technologies.

INNOVATIVE: To an ever-greater degree, creativity and cultural dimensions drive innovation and competitiveness – while underpinning resilience and well-being. Cultural and creative dimensions make new digital and physical products and services appealing and attractive. Similarly, societal transformations depend on behavioural changes, which are largely based on changes in lifestyle, culture and perceptions. In such processes, the human is at the centre, and cultural heritage, the arts and the cultural and creative industries are key.

R&I actions will cover a variety of subjects, such as strengthening the capacity of European design to act as a driver of sustainable competitiveness and reinforcing the role of culture and the arts for promoting European values, preventing conflicts, fostering peace and reconciliation and promoting health, well-being and social cohesion.

Many of the actions funded under this Destination will need access to and/or generate data. Where appropriate, actions should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud or included in the European Strategy Forum on Research Infrastructures (ESFRI) and the ESFRI roadmap, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of such actions is FAIR (Findable, Accessible, Interoperable and Re-usable).

The innovation ecosystems created and nurtured by the Knowledge and Innovation Communities (KICs) of the European Institute of Innovation and Technology (EIT), in particular the KIC “EIT Culture and Creativity”, may contribute to actions under this destination, and may as appropriate be considered by applicants.

In line with the Commission priorities, R&I actions under this Destination will help promote our European way of life, contribute to a Europe fit for the digital age and to achieving the European Green Deal goals, as well as support an economy that works for people. They will

contribute to the New European Bauhaus⁷² initiative, to reaching the UN Sustainable Development Goals and to building a stronger, more participatory and crisis-resilient society and economy. They will support the realisation of the full potential of cultural heritage, arts and cultural and creative industries as drivers of sustainable innovation and a European sense of belonging.

The topic ‘HORIZON-CL2-2025-01-HERITAGE-03: A European Collaborative Cloud for Cultural Heritage – Innovative use cases’ aims at supporting the digital European cultural heritage collaborative space referred to as the “European Collaborative Cloud for Cultural Heritage” (ECCCH), and contributes to the vision and objectives of the Commission⁷³.

An ex-ante impact assessment for the ECCCH was carried out between December 2021 and March 2022 by eight renowned independent experts contracted by the Commission⁷⁴. This ex-ante impact assessment examined and described the needs of a digital European cultural heritage collaborative space from the perspective of the foreseen users (cultural heritage institutions, researchers, cultural and creative industries, etc.) and of European societies, thoroughly reviewed existing initiatives that might satisfy parts of these needs, and outlined the most important aspects to consider in implementing such a collaborative space.

The conclusion of the ex-ante impact assessment is that the ECCCH is highly important to Europe’s cultural heritage institutions and to European societies. In order to address the urgent evolving needs of Europe’s cultural heritage sector in the digital age for specifically adapted collaborative spaces, the European Union is ramping up its investments through the ECCCH, and also the common European Data Space for Cultural Heritage (the Data Space)⁷⁵ funded under the Digital Europe programme. The topics under the ECCCH are based on the conclusions and recommendations of the experts’ ex-ante impact assessment.

Some key characteristics of the vision for the ECCCH include:

- The ECCCH will be addressed to professionals⁷⁶. It will enable an unprecedented level of lasting collaboration and co-creation between public and private players that will generate new realms of research, knowledge and creation of societal value.
- The basic ECCCH platform will provide easy to use tools for the most important needs.

⁷² The New European Bauhaus initiative was launched by European Commission President von der Leyen in her State of the European Union speech autumn 2020. More information here: https://europa.eu/new-european-bauhaus/index_en

⁷³ Recommendation (EU) 2021/1970 of 10 Nov 2021 on a common European Data Space for Cultural Heritage.

⁷⁴ European Commission, Directorate-General for Research and Innovation, Brunet, P., De Luca, L., Hyvönen, E., et al., Report on a European collaborative cloud for cultural heritage : ex – ante impact assessment, 2022, <https://data.europa.eu/doi/10.2777/64014>

⁷⁵ See further <https://digital-strategy.ec.europa.eu/en/library/staff-working-document-data-spaces>

⁷⁶ In the context of the ECCCH calls, ‘professionals’ should be understood as the wide and interdisciplinary group of people working with cultural heritage in a professional or semi-professional way, researchers as well as people working with related activities such as within the cultural and creative industries.

- Active user communities that contribute to training and support, as well as common data models, guidelines and libraries for developing tools (including support for Graphical User interfaces (GUI) and visualisation), will ensure that also less well-equipped institutions will draw the full benefit of the ECCCH.
- To enhance collaboration and co-creation, IPR rights of the digital objects stored in the ECCCH and produced by ECCCH-based collaboration will be fully recorded and traceable. Guidelines for the use of IPR rights, such as rights statements provided by RightsStatements.org should be used where appropriate. This will enable new business models in the intersection between cultural heritage and cultural and creative industries.
- The long-term sustainability of data and data formats is one of the underlying principles of the ECCCH. The ECCCH will tackle these challenges through its architecture and basic functionalities. The design and architecture of the ECCCH is based on three principles:
 - a. digital twins of heritage objects,
 - b. digital continuum, tracing all interactions with heritage objects and related data objects,
 - c. digital ecosystem, open to all stakeholders, professions and activities to interact with each other and with the digital heritage objects, ultimately leading towards a new generation of multidimensional, interconnected and knowledge-enhanced heritage data forming digital commons, where the ECCCH will play a key role.
- The architecture of the ECCCH will ensure an evolutionary design, which will allow the adaption and incorporation of new technologies and tools and to fulfil new user requirements, while discontinuing less used tools.
- An open Application Programming Interface will allow new functionality to be developed and incorporated in the ECCCH by different initiatives, and encourage interoperability.
- The ECCCH will be open and inclusive, both in terms of the users of the platform and the connections to other related initiatives/platforms such as the Data Space.
- The ECCCH should build on the wealth of existing knowledge, technologies and work processes in Europe. It should draw on previous experience and best practice. The ECCCH and the Data Space should complement each other towards the common vision.
- The ECCCH should ensure, through its Governance body, the engagement of a wide range of appropriate representatives from Member States and Associated Countries, as well as from related EU initiatives.

The ECCCH will thus be a genuine collaboration platform, which brings together a wide array of professions, researchers and technologies for museums and other cultural heritage

institutions. It will include and develop interactive tools for research, curation, restoration, preservation and for reaching out to citizens and cultural and creative industries, properly protect and manage IPR and allow commercial as well as non-commercial collaboration with a wide range of players.

All topics under the ECCCH are subject to the following conditions:

- All software developed should be open source, licensed under a CC0 public domain dedication or under an open source license as recommended by the Free Software Foundation⁷⁷ and the Open Source Initiative⁷⁸.
- If the use of fully open source software would require disproportional efforts or significantly diminish the quality or performance of the software, and if suitable non open source function libraries exist, such libraries may be used provided that a full user license free of charge for an unlimited period of time is granted to the consortium responsible for the ECCCH as well as to all users of the ECCCH.
- All software and other related deliverables should be compliant with the data model and the software development guidelines elaborated by the project funded under topic 'HORIZON-CL2-2023-HERITAGE-ECCCH-01-01'.
- All projects funded should participate in concertation activities with the project funded under topic 'HORIZON-CL2-2023-HERITAGE-ECCCH-01-01'

Expected impacts:

Proposals for topics under this Destination should set out a credible pathway to contributing to the following expected impact of the Horizon Europe Strategic Plan:

- The full potential of cultural heritage, arts and cultural and creative industries and sectors as drivers of both sustainable innovation and a European sense of belonging is realised through a continuous engagement with society, citizens and economic sectors.

Legal entities established in China are not eligible to participate in Innovation Actions in any capacity. Please refer to the Annex B of the General Annexes of this Work Programme for further details.

GREEN

Proposals are invited against the following topic(s):

HORIZON-CL2-2025-03-HERITAGE-01: Co-funded European partnership for Resilient Cultural Heritage

Call: Cluster 2 Partnerships

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⁷⁸ <https://opensource.org/licenses>

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 60.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 60.00 million.
<i>Type of Action</i>	Programme Co-fund Action
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>Representatives of the EU institutions will be part of the evaluation committee.</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>The starting date of grants awarded under this topic may be as of the submission date of the application. Applicants must justify the need for a retroactive starting date in their application. Costs incurred from the starting date of the action may be considered eligible.</p> <p>Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. Financial support provided by the participants to third parties is one of the primary activities of the action in order to be able to achieve its objectives.</p> <p>As financial support provided by the participants to third parties is one of the primary activities of the action in order to be able to achieve its objectives, the EUR 60 000 threshold provided for in Article 208(a) of the Financial Regulation does not apply.</p> <p>Given the type of action and its level of ambition, the maximum amount of FSTP to be granted to an individual third party is EUR 3 million, per grant. However, if the objectives of the action would otherwise be impossible or overly difficult (and duly justified in the proposal) the</p>

	<p>maximum amount may be higher.</p> <p>The funding rate is up to 30% of the eligible costs.</p>
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Expected Outcome: In line with the European Climate Law⁷⁹ and its vision for a climate-neutral and resilient Europe by 2050, this topic aims at supporting transnational activities which will enable or contribute to several expected impacts of the Horizon Europe programme and its 2nd Strategic Plan 2025-2027, in particular expected impact 8, related to realising the full potential of cultural heritage, and impact 21, related to advancing science for a fair transition to a climate-neutral and resilient society.⁸⁰ To that end, proposals under this topic should contribute to all of the following expected outcomes:

- Public funders of research and innovation actions, policy-makers and research communities are provided with a holistic and strategic research and innovation multi-annual programme of activities related to cultural heritage⁸¹ and resilience (European Partnership for Resilient Cultural Heritage, hereafter referred to as partnership), including challenges, expected impacts, outcomes, objectives, governance, and opportunities for cooperation contributing to the achievement of the relevant UN Sustainable Development Goals (SDGs)⁸² and the targets of the Paris Agreement⁸³;
- Investments in research and innovation at the intersection of cultural heritage and climate change sciences are increased and better co-ordinated between the two fields of research through the sharing of findings, data, tools and methodologies across sectors for the benefit of the society as a whole. To this end, research-based policy recommendations will be proposed to policy- and decision-makers in different sectors of governance at national and regional levels, with a view to overcoming existing fragmentation in the European Research Area (ERA);
- Research funders, businesses, policymakers, cultural heritage professionals and research communities from various scientific disciplines covered by STEAM (natural and formal

⁷⁹ Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law'): <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R1119>

⁸⁰ European Commission, Directorate-General for Research and Innovation, *Horizon Europe strategic plan 2025-2027*, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2777/092911>, p. 8.

⁸¹ Definition of cultural heritage mentioned in the Council conclusions of 21 May 2014 on cultural heritage as a strategic resource for a sustainable Europe (2014/C 183/08) and recalled in the European Framework for Action on cultural heritage: <https://op.europa.eu/en/publication-detail/-/publication/5a9c3144-80f1-11e9-9f05-01aa75ed71a1>

⁸² SDG 3 Good Health and Well-being, SDG 4 Quality Education, SDG 5 Gender Equality, SDG 8 Decent Work and Economic Growth, SDG 9 Industry, Innovation and Infrastructure, SDG 10 Reduced Inequalities, SDG 11 Sustainable Cities and Communities, SDG 12 Responsible Consumption and Production, SDG 13 Climate Action, SDG 16 Peace, Justice and Strong Institutions and SDG 17 Partnerships for the Goals.

⁸³ Council Decision (EU) [2016/1841](#) of 5 October 2016 on the conclusion, on behalf of the European Union, of the Paris Agreement adopted under the United Nations Framework Convention on Climate Change (OJ L 282, 19.10.2016, pp. 1-3); [Paris Agreement](#) (OJ L 282, 19.10.2016, pp. 4-18)

sciences, technology, engineering, arts and mathematics) and SSH (social sciences and humanities), as well as actors from different economic sectors will work towards common objectives and measures. The long-term Strategic Research and Innovation Agenda (SRIA) for the partnership will aim to demonstrate the role and potential of tangible and intangible cultural heritage in advancing Europe's climate neutrality and green transition by providing innovative and traditional knowledge-based solutions;

- A significantly strengthened scientific knowledge base at the intersection of heritage- and climate sciences contributes to more effective climate change adaptation and mitigation measures. Policy-makers and various stakeholders, including local communities, should be enabled to learn and draw lessons from the past, design and tailor risk management to specific threats and the resulting challenges for the traditions and living areas of different populations, cultural landscapes and sites, monuments, intangible cultural heritage and other assets, such as museums, libraries and archives collections under their responsibility;
- European cultural heritage professionals and stakeholders will engage with a wide range of partners from the EU, Associated Countries and worldwide, in the research and innovation actions under the partnership to address the global challenges of climate change, deploy good practices and enhance cultural heritage transnational research, its societal impact and Europe's leading position in the field of cultural heritage and climate neutrality.

Scope: The challenge of cultural heritage lies in preserving and safeguarding a society's rich history, traditions, artefacts, and knowledge. This involves addressing issues such as deterioration, damage, theft, conflict, changing societal values and new challenges such as the climate change. In addition, it is essential to strike a balance between accessibility for future generations and respect for cultural sensitivities.

Proposals for the co-funded partnership on resilient cultural heritage must aim to enhance efforts to better understand and mitigate the effects of the triple planetary crisis (climate change, pollution and biodiversity loss), with focus on the impact of climate change on tangible and intangible cultural heritage, in line with the EU's cultural and environmental policies, embodied in the Creative Europe programme and the European Green Deal.⁸⁴

The partnership will focus on resilience as the individual and collective capacity to anticipate, respond and adapt to situations where the protection and safeguarding of cultural heritage becomes more challenging due to increased risks of loss and damage. At the same time, the potential of cultural heritage to support resilience needs to be harnessed, as cultural heritage has a strong societal, environmental, economic ,psychological and well-being dimension and

⁸⁴ Regulation (EU) 2021/818 of the European Parliament and of the Council of 20 May 2021 establishing the Creative Europe Programme (2021 to 2027) and repealing Regulation (EU) No 1295/2013: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0818>; European Commission, Directorate-General for Communication, *European green deal – Delivering on our targets*, Publications Office of the European Union, 2021, <https://data.europa.eu/doi/10.2775/373022> ; [Legal documents on Delivering the European Green Deal - European Commission \(europa.eu\)](https://data.europa.eu/doi/10.2775/373022)

contributes to the construction and preservation of individual and collective identity and acceptance of incoming changes.

Through its ability to bring together different stakeholders (e.g. research funders, cultural heritage authorities and professionals, citizens, innovators, policy-makers), the partnership will create a critical mass of resources to implement a long-term Strategic Research and Innovation Agenda (SRIA), building on the work of the Joint Programming Initiative (JPI) Cultural Heritage and the ARCHE Coordination and Support Action funded under Horizon Europe 2021 call for proposals in Cluster 2. Proposals should build on existing knowledge, activities and networks, notably the ones funded by the European Union, to the extent appropriate. The input of other ERA entities such as HERA⁸⁵, CHANSE⁸⁶, the JPI Climate⁸⁷ may be considered.

Proposals should in addition take into account the findings of the first-ever European Climate Risk Assessment (EUCRA) report⁸⁸, which calls for decisive evidence-based actions to prevent lock-in in maladaptive pathways to address climate-related risks, such as in land-use planning and long-lived infrastructure. The partnership is expected to contribute to the Communication *Managing climate risks - protecting people and prosperity*, which requires improving the science base for future adaptation actions and aims to foster innovation and build resilience.⁸⁹ The partnership should also develop its activities considering the 8th Environment Action Programme Mid-Term Review as published in March 2024.⁹⁰

Given that climate change is leading to an increase in the frequency, intensity and complexity of natural disasters within the Union and worldwide, the partnership should in addition contribute to achieving the objectives of the Union Civil Protection Mechanism⁹¹, which includes a focus area on cultural heritage when protecting people, environment and property against natural and man-made disasters in a spirit of international solidarity, through practical cooperation and coordination.

The partnership should be implemented through a joint programme of activities ranging from coordinating transnational research efforts to other activities such as improving access to data and services, optimising the use of and services provided by research infrastructures, as well as networking, capacity building, training and dissemination activities.

In the preparation of topics for the partnership's transnational calls for proposals and additional activities, due attention should be paid to the gender dimension and the

⁸⁵ <https://heranet.info/>

⁸⁶ <https://chance.org/>

⁸⁷ <https://jpi-climate.eu/>

⁸⁸ [European Climate Risk Assessment — European Environment Agency \(europa.eu\)](https://europeanclimate.eu/)

⁸⁹ COM(2024) 91 final; <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2024:91:FIN>

⁹⁰ COM(2024) 123 final;

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52024DC0123>

⁹¹ Decision No 1313/2013/EU of the European Parliament and of the Council of 17 December 2013 on a Union Civil Protection Mechanism (OJ L 347, 20.12.2013, p. 924) and Regulation (EU) 2021/836 of the European Parliament and of the Council of 20 May 2021 amending Decision No 1313/2013/EU on a Union Civil Protection Mechanism (OJ L 185, 26.5.2021, p. 1); <https://eur-lex.europa.eu/eli/reg/2021/836/oj>

intersectionality of grounds for potential discrimination such as disability, age, socio-economic status, racial or ethnic origin, nationality, sexual orientation, etc., in order to be in line with EU anti-discrimination policy⁹² and to achieve meaningful and significant outcomes that enhance the societal impact of the relevant activities. The advice of gender experts should be taken into account in developing mitigation and adaptation measures at the nexus of cultural heritage and climate change, in examining the functions of cultural heritage and related societal values, and in supporting sustainable development.

Taking all aforementioned priorities and references into account, the partnership should aim to:

- Build capacity by fostering fundamental and applied interdisciplinary collaborative research (SSH and STEAM) between the cultural heritage and climate research communities.
- Provide resources and incentives to conduct holistic research and nurture collaborative actions to drive the transformation towards more sustainable development, just futures and a healthier way of life and overall well-being.
- Create and disseminate new knowledge, techniques, skills, strategies and materials for sustainable preservation, conservation, and management of climate-related risks in the cultural heritage field as well as other man-made related risks.
- Promote innovations in industries and to provide scaled-up solutions and applications for climate change mitigation and adaptation.
- Develop a coherent methodology for obtaining reliable information, quantitative and qualitative data on cultural heritage and climate change, as well as on the costs and benefits of adaptation measures, with particular emphasis on processes and life cycles related to the circular economy.
- Improve long-term monitoring of cultural heritage through the use of innovative technologies and risk management models to document, inventory and predict the negative and positive impacts of climate change on and through cultural heritage.
- Integrate cultural heritage into mainstream climate change and environmental regulations, policies and adaptation strategies by operationalising heritage-based solutions and knowledge of the past.
- Provide policy recommendations to enhance social cohesion and the European sense of belonging through cultural heritage in communities and societies impacted by climate change.

⁹² A Union of Equality: Gender Equality Strategy 2020-2025, COM(2020) 152 final, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0152>

- Encourage the continued conservation and preservation (through maintenance) by involving, educating and facilitating community participation, with a special focus on sustainability and a quality approach.
- Increase collaboration across countries and regions and to move away from a focus on individual geopolitical regions to overcome the fragmentation of the wide landscape of stakeholders, competences, resources, policies, programmes and initiatives.

The partnership is open to all EU Member States and countries associated to Horizon Europe and will remain open to third countries wishing to join.⁹³ Partners are expected to contribute financially and/or in kind, depending on the level of ambition of the proposed activities. The partnership should be open to new partners throughout its lifetime. Important note: the EU contribution will not be increased accordingly.

The partnership should include or engage with the following stakeholders: (i) ministries responsible for R&I policy, as well as national and regional R&I and technology funding agencies and foundations; (ii) ministries responsible for cultural heritage, education, environment, spatial planning and development, tourism, etc., as well as other relevant national and regional authorities, organisations and providers; (iii) research infrastructures such as the European Research Infrastructure for Heritage Science (E-RIHS); (iv) industry; and (v) charities and other non-profit organisations, for example of end-users of cultural heritage assets, active in safeguarding cultural heritage and/or in adapting to or mitigating the effects of climate change.

The governance structure of the partnership should implicate the relevant stakeholders in advance to coordinate, guide and mentor the research and innovation activities and facilitate the use and uptake of the results. The partnership's activities should give rise to ready-to-use solutions. The governance structure should involve key stakeholders, including, but not limited to, the research and innovation community and cultural heritage professionals from sectors relevant to the scope of the partnership. In order to enhance the societal impact of the activities, the approach should empower citizens to contribute to the co-design/co-creation/co-assessment of research and innovation agendas/contents/outcomes.

To ensure coherence and complementarity of activities and leverage knowledge and investment possibilities, the partnership is expected to establish relevant complementarities with other Horizon Europe actions under relevant Clusters of Pillar II, partnerships and missions, such as “Adaptation to climate change – Climate-ADAPT”, “Restoring our ocean and waters by 2030”, “Biodiversa+”, “Climate-neutral and smart cities”, “Built4People”, and the “New European Bauhaus” Facility.⁹⁴

Proposals should be complementary to ongoing Horizon Europe projects to ensure the complementarity of deliverables and outcomes, where appropriate. Proposals should include a

⁹³ The Global Approach to Research and Innovation *Europe's strategy for international cooperation in a changing world*, COM(2021) 252 final

⁹⁴ Working document on ‘Coherence and Synergies of Candidate European Partnerships under Horizon Europe’;

budget for the attendance of regular joint coordination meetings and may consider covering the costs of any other joint activity, without the prerequisite to detail concrete joint activities at this stage. The partnership will be encouraged to develop cross-fertilisation links with projects funded since the beginning of Horizon Europe notably under Cluster 2, following the call topics within the Green priority of Destination 2, topics relating to the European Collaborative Cloud for Cultural Heritage (ECCCH) or projects such as those selected on the basis of topics HORIZON-CL2-2021-HERITAGE-01-01 – Green technologies and materials for cultural heritage⁹⁵, HORIZON-CL2-2022-HERITAGE-01-08 - Effects of climate change and natural hazards on cultural heritage and remediation⁹⁶, or HORIZON-CL2-2023-HERITAGE-01-01: Advanced technologies for remote monitoring of heritage monuments and artefacts⁹⁷.

Proposals should also explore how to co-operate with other relevant EU and international actions and describe specific activities envisaged. They could propose to facilitate interactions and knowledge transfer with various economic sectors such as: cultural and creative sectors and industries (CCIs), agricultural and forestry policy, blue economy sectors, sustainable tourism, circular economy, infrastructures and construction, as well as society changes and transitions; urbanisation, spatial planning, regional growth, sustainable tourism development.⁹⁸

Moreover, proposals should consider synergies with different EU programmes, including EU space programmes (Copernicus, Galileo) to foster the use of emerging or operational space technologies for policy development, and the Digital Europe programme.⁹⁹ Cooperation with the JRC may be envisaged, in particular for actions related to monitoring monuments, cultural heritage sites and cultural landscapes. The partnership should align with EU-wide initiatives on open access and FAIR data (findable, accessible, interoperable and re-usable).

The partnership should be linked to the European Institute of Innovation and Technology's Knowledge and Innovation Community - EIT Culture & Creativity as there is a common aim to scale up and widen to as many Member States/Associated Countries as possible a culture and creativity-driven European innovation ecosystem.

Proposals may include synergies between Horizon Europe and European Regional Development Fund (ERDF) programmes, including Interreg programmes, since Horizon Europe seeks to promote synergies with other EU programmes and to combine Horizon Europe funding with other EU, national or regional funding instruments in the same

⁹⁵ https://cordis.europa.eu/programme/id/HORIZON_HORIZON-CL2-2021-HERITAGE-01-01/en

⁹⁶ https://cordis.europa.eu/programme/id/HORIZON_HORIZON-CL2-2022-HERITAGE-01-08/en

⁹⁷ https://cordis.europa.eu/programme/id/HORIZON_HORIZON-CL2-2023-HERITAGE-01-01/en

⁹⁸ See above and European Cultural Heritage Green Paper produced by Europa Nostra in close cooperation with ICOMOS and the Climate Heritage Network, with the input of other members of the European Heritage Alliance, and supported by the European Investment Bank Institute and the Creative Europe EU programme. <https://www.europanostra.org/our-work/policy/european-cultural-heritage-green-paper/>

⁹⁹ Regulation (EU) 2021/694 of the European Parliament and of the Council of 29 April 2021 establishing the Digital Europe Programme and repealing Decision (EU) 2015/2240 (OJ L 166, 11.5.2021, p. 1–34); <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0694&qid=1623079930214>

operation, project or initiative in order to achieve greater impact and efficiency (cumulative/complementary funding).¹⁰⁰

To address the ambitious challenges in front of the partnership, cooperation with international organisations, the private sector and non-European institutions and experts may be considered. The participation of third countries is encouraged but their commitment to the partnership would not be taken into account for the calculation of EU funding. Applicants should describe in their proposal the methodology for their cooperation and the objectives they wish to achieve by joining the partnership.

Proposals should pool the necessary financial resources from the participating national (or regional) research programmes with a view to implementing joint calls for transnational proposals resulting in grants to third parties. It is expected that the partnership organises joint calls on an annual basis and will therefore have sufficient time to carry out the co-funded projects.

The total indicative budget for the partnership is up to EUR 60 million and subject to the effective implementation of the financial commitments made by the members of the consortium.

The expected duration of the partnership is seven to ten years.

HORIZON-CL2-2025-02-HERITAGE-02-two-stage: Innovative approaches to intangible cultural heritage for societal resilience

Call: Culture, Creativity and Inclusive Society - 2025 - Two-stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions

¹⁰⁰ Annex IV to Regulation (EU) 2021/695 establishing Horizon Europe. - the 2022 Commission Notice on ‘Synergies between Horizon Europe and ERDF programmes’ (2022/C 421/03)(2022/C 421/03); - the 2014 Commission guidance document on ‘Enabling synergies between European Structural and Investment Funds, Horizon 2020 and other research, innovation and competitiveness-related Union programmes’; - the European Court of Auditors’ Special Report No 23/2022 ‘Synergies between Horizon 2020 and European Structural and Investment Funds – Not yet used to full potential’

	under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹⁰¹ .
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Expected Outcome: Projects should contribute to the following expected outcome:

- Policymakers are provided with a multi-dimensional overview and assessment of intangible cultural heritage (ICH) role in contemporary societal challenges and European social, economic, and cultural dynamics. A comprehensive analysis of ICH's potential for societal resilience and its contribution to climate change mitigation and adaptation becomes available.

Additionally, proposals should contribute to at least two of the following expected outcomes:

- Policymakers (at all levels), public authorities and stakeholders have access to an array of innovative practices, strategies, and tools for incorporating ICH in community resilience planning, for ICH innovative safeguarding and for expanding community engagement with ICH practice, safeguarding, and communication. This includes awareness of gender dynamics in ICH practices.
- Innovative policies aimed at preserving ICH amid disasters, conflicts, migration, and population displacements are supported by data and knowledge.
- New methodological approaches and tools using digital technologies for documenting, communicating, and transmitting ICH become available. Community engagement with ICH, particularly among youth, crucial for sustainable and intergenerational transmission of living cultural practices, is broadened. The alliance between communities and researchers is strengthened. The involvement of education and heritage preservation institutions and agencies is enhanced.
- The sustainable use of ICH as source of inspiration for creative designs and practices, to spur sustainable development and provide a valuable resource to communities, e.g. for attracting cultural tourism, is enhanced. Measures to prevent overuse, inappropriate use, and depletion are strengthened.
- A future research agenda is devised for sustainable ICH practices respecting cultural diversity, human rights, and gender equality; cultural aspects of societal resilience will be addressed.

¹⁰¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope: Intangible cultural heritage (ICH) includes traditions, oral histories, performing arts, social practices, rituals, festive events, as defined by UNESCO¹⁰². ICH represents a repository of traditional knowledge and forms the backbone of a community's identity and continuity.

Societal challenges such as globalization, urbanization, migration, conflicts, disasters, and climate change significantly threaten the safeguarding and transmission of these cultural legacies. Additional threats include rural depopulation, an ageing society, and a growing disconnection between older and younger generations¹⁰³. Research on ICH is dynamic but noteworthy gaps exist. There is a need for comprehensive risk assessments on the impact of societal challenges and climate change on ICH, including the erosion of cultural practices due to migration, displacement, or to a changed living environment.

A crucial under-researched area is the role of ICH in strengthening resilience against societal challenges and disasters and in fostering climate change mitigation and adaptation measures. Traditional knowledge systems and practices developed over generations by communities, including indigenous communities, and embedded within ICH, provide insights for sustainable natural resource management and adaptation strategies tuned to local ecosystems. This includes identifying natural hazard risks, disaster response, and post-disaster restoration of social and natural environments. Additionally, ICH practices such as rituals, storytelling, or traditional craftsmanship, help preserve cultural identity while enhancing mental health and quality of life, contributing to social well-being, community resilience, and recovery efforts.

In parallel, there is an urgent need for innovative approaches to sustain and revitalize ICH by fostering participatory approaches that actively involve communities, with particular attention to young people, whose engagement is key for safeguarding and transmitting ICH. Furthermore, strengthening research-community collaboration and involving the education sector are essential for co-creating knowledge and innovation with concrete societal impacts. Potential areas for exploration include innovative methods to promote and safeguard ICH, and bridging gaps in heritage roles, including women's contribution in the safeguarding and transmission of ICH. Advanced digital technologies, including artificial intelligence, can innovate support for ICH through sustainable documentation, safeguarding, and dissemination, including through immersive experiences, and respecting the balance between safeguarding and evolution. Consideration should be given to preserving audiovisual collections which serve as carrier of ICH and capture its history and evolution. Proposals might consider leveraging the digital platform and tools provided by the European Collaborative Cloud for Cultural Heritage¹⁰⁴.

¹⁰² Convention for the safeguarding of the intangible cultural heritage (2003) <https://ich.unesco.org/en/convention>. Proposals may adopt a broader definition of intangible cultural heritage, supported by a solid scientific foundation.

¹⁰³ UNESCO highlighted in a visual the phenomena threatening intangible cultural heritage, grouping them into nine categories <https://ich.unesco.org/dive/threat/?language=en>.

¹⁰⁴ In addition, where applicable, proposals can leverage the data and services available through the research infrastructures included in the European Strategy Forum on Research Infrastructures (ESFRI) and the ESFRI roadmap and those federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that any data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

Leveraging ICH through sustainable practices can contribute to sustainable development. ICH reveals ways of living that are less resource demanding. For example, traditional building techniques can inspire sustainable architectural designs; centuries-old agricultural practices can inform organic farming; and traditional crafts, music, and folklore can drive innovation in fashion, product design, and the arts. By integrating intangible cultural elements into modern practices, communities can create globally resonant, high-value products while keeping their cultural significance. Cultural tourism, centred around ICH, can boost local economies, and foster intercultural dialogue. Maintaining the integrity of ICH and preventing depletion is essential, as is ensuring the sustainability and fair distribution of benefits from ICH among the community.

Proposals should consider involving communities bearing and practicing intangible cultural heritage alongside with researchers and other stakeholders. Proposals should build on existing knowledge, activities, and networks, notably those funded by the European Union. They should complement ongoing Horizon Europe projects and are expected to liaise with the European Partnership on Resilient Cultural Heritage (see HORIZON-CL2-2025-03-HERITAGE-01).

The Commission expects funded projects to regularly coordinate with relevant Cluster 2 projects (including those under the European Partnership on Resilient Cultural Heritage) to ensure complementarity of deliverables and outcomes, where appropriate.

DIGITAL

HORIZON-CL2-2025-01-HERITAGE-03: A European Collaborative Cloud for Cultural Heritage – Innovative use cases

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 2.50 and 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 26.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>

<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁰⁵.</p> <p>Beneficiaries may provide financial support to third parties to cultural heritage institutions, in take-up of tools, technologies and for populating and validating the relevant use cases through experiments. A maximum of 15% of the budget may be dedicated to financial support to third parties. The maximum amount to be granted to each third party is EUR 60 000.</p>
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Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Findings from thorough end-to-end testing based on real use cases contribute to a seamlessly working, user-friendly, inclusive and powerful European Collaborative Cloud for Cultural Heritage (ECCCH).
- By documenting and communicating the use cases deployed, a wide collection of innovative uses of the ECCCH is elaborated, which contributes to exemplify and illustrate its benefits and attract new users and user groups.
- By identifying and implementing improvements and engaging with users, significant contributions are made for the ECCCH to be widely used by European cultural heritage professionals and researchers, enabling new ways to interact, cooperate and co-create, thus supporting the generation of new knowledge and opening of new research paradigms.

Scope: This topic aims at implementing real use cases and carrying out demanding end-to-end testing of the platform and its tools, in order to verify its capabilities and improve the ECCCH.

The activities carried out should focus on concrete use cases, undertaken by the participating institutions, professionals and researchers with a view to improve their results or work processes.

¹⁰⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

The activities carried out should make use of several of the key features of the ECCCH, including the user tools implemented on it¹⁰⁶. Such key features may include use of the advanced digital twins, of the large-scale cooperation and co-creation features, of the digital continuum or of the advanced features for commercial cooperation with, for example, cultural and creative industries¹⁰⁷. Activities carried out may also focus on the seamless interconnection of the ECCCH with other related platforms such as the Common European Data Space for Cultural Heritage and the European Open Science Cloud. Proposals should outline a focus of the planned activities that best achieve the expected outcomes, which may include some of the aspects mentioned.

Activities should involve a wide range of different organisations from across Europe, in accordance with the focus chosen. Entities from at least five different Member States or Associated Countries should be involved as active users of the ECCCH platform. Also, entities of different characteristics should be involved, such as small and large organisations, from different subsectors/areas of activity or scientific disciplines, etc.

The activities carried out and the results generated should be properly documented so as to serve as a good base for improvements or corrections of the platform and/or of the user tools implemented on it, and also for communicating innovative uses of the ECCCH. Contributions should be made to extend the user base of the ECCCH by promoting use cases and outreach activities, possibly together with or coordinated with other ECCCH projects.

Projects funded under this topic may build on testing or other activities carried out by other ECCCH projects, but must not duplicate activities that are funded under other ECCCH projects. Activities should add new value to the ECCCH. Therefore, projects funded under this topic should coordinate closely with previously funded ECCCH projects and provide for sufficient flexibility so as to avoid duplication and ensure that the activities carried out offer important contributions to validate and improve the platform.

Proposals should foresee own capacity to implement important improvements and fix problems detected. Such modifications or extensions of the ECCCH platform functionality should be carried out in accordance with the data model and the software development and documentation guidelines of the ECCCH, established by the project funded under topic HORIZON-CL2-2023-HERITAGE-ECCCH-01-01¹⁰⁸. All software and other related deliverables should be compliant with the guidelines elaborated by the project funded under topic HORIZON-CL2-2023-HERITAGE-ECCCH-01-01, and should be implemented in compliance with the design of the ECCCH, using the low-level libraries established by the project funded under topic HORIZON-CL2-2023-HERITAGE-ECCCH-01-01.

¹⁰⁶ For an orientation of the range of user tools being developed, please refer to the previous ECCCH call topics in the Horizon Europe Cluster 2 Work Programmes 2023 and 2024.

¹⁰⁷ The key features of the ECCCH are further explained in the Destination introduction text and in the 'Report on a European collaborative cloud for cultural heritage - Ex – ante impact assessment' available here:

<https://op.europa.eu/en/publication-detail/-/publication/90f1ee85-ca88-11ec-b6f4-01aa75ed71a1/language-en>

¹⁰⁸ See further <https://cordis.europa.eu/project/id/101157364>

All software developed should be open source, licensed under a CC0 public domain dedication or under an open-source licence as recommended by the Free Software Foundation¹⁰⁹ and the Open-Source Initiative¹¹⁰. If the use of open source software components would require disproportional efforts or significantly diminish the quality or performance of the software, proprietary components may be used provided that: An open functional replacement is available; they do not introduce proprietary data formats or Application Programming Interfaces; a full user license free of charge for an unlimited period of time is granted to the consortium responsible for the ECCCH and all its users. Applicants should state clearly if all developed software will be open source, and if not clearly explain the reasons.

To the extent that data is produced, efforts should be made to ensure that it is FAIR (Findable, Accessible, Interoperable and Re-usable). To the extent that new or modified interoperability standards need to be developed for data sharing within and across data ecosystems, these should build on the FAIR data principles and leverage already adopted practices, especially those in the relevant European common data spaces and in the European Research Infrastructures.

Financial support to third parties may be used to facilitate the engagement with ECCCH users beyond the project consortium. The financial support to third parties can only be provided in the form of grants.

In order to ensure good coordination among the different ECCCH projects, proposals should make provisions to actively participate in the common activities of the ECCCH initiative. Projects funded under this topic should coordinate technical work with the relevant projects funded under other call topics of the ECCCH initiative, and contribute to the activities and objectives of the project funded under the topic HORIZON-CL2-2023-HERITAGE-ECCCH-01-01. Proposals should include a budget for the attendance to regular joint coordination meetings, and may consider covering the costs of any other joint activities without the prerequisite to detail concrete joint activities at proposal stage.

Projects funded under this topic should set up their project websites under the common ECCCH website, managed by the project funded under topic HORIZON-CL2-2023-HERITAGE-ECCCH-01-01.

The Commission expects the different projects funded under this topic to establish regular coordination mechanisms in order to ensure synchronised planning, as well as synergy and/or complementarity of deliverables and outcomes, where this is appropriate.

The Commission estimates that a project duration of approximately 2 – 2.5 years is appropriate for the projects funded under this topic.

Please also refer to the Destination introduction text to consider some key characteristics of the vision for the ECCCH.

¹⁰⁹ <https://www.gnu.org/licenses/license-list#SoftwareLicense>

¹¹⁰ <https://opensource.org/licenses>

HORIZON-CL2-2025-01-HERITAGE-04: Leveraging artificial intelligence for creativity-driven innovation

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 and 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹¹¹.</p>

Expected Outcome: Projects should contribute to at least three of the following expected outcomes:

- Policy makers, Cultural and Creative Industries (CCI)¹¹² and other stakeholders gain insights into the impact of AI, including, but not limited to, generative AI, on artists, creatives, cultural professionals, creative businesses and on the market for cultural and creative goods and services, as well as on the future of creative work.
- Policy makers, research (including SSH disciplines), education, industry, and society benefit from robust, evidence-based policy recommendations and concrete solutions promoting a mutually beneficial interplay between CCI and AI. These policy

¹¹¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹¹² “Cultural and creative industries are those industries that are based on cultural values, cultural diversity, individual and/or collective creativity, skills and talent with the potential to generate innovation, wealth and jobs through the creation of social and economic value, in particular from intellectual property; they include the following sectors relying on cultural and creative inputs: architecture, archives and libraries, artistic crafts, audiovisual (including film, television, software and video games, and multimedia and recorded music), cultural heritage, design, creativity-driven high-end industries and fashion, festivals, live music, performing arts, books and publishing (newspapers and magazines), radio and visual arts, and advertising” European Parliament resolution of 13 December 2016 on a coherent EU policy for cultural and creative industries (2016/2072(INI))

recommendations and solutions aim for a fairer marketplace that fosters transparency, fairness, non-discrimination, diversity, and accountability by design, while respecting artistic freedom.

- Policy makers, the CCI, and stakeholders are provided with case studies and evidence-based policy recommendations to harness the CCI's potential for AI innovation and promote human-centric, unbiased AI applications.
- Frameworks, protocols, and tools for managing intellectual property and personality rights in AI development, training, and use, addressing unauthorised data use and legal breaches, are available to CCI and public authorities.
- Mechanisms or platforms, such as CCI-led competence centres or hubs, are proposed to facilitate interaction among artists, creatives, AI specialists, cultural institutions, and creative businesses. These will facilitate the sharing of knowledge and experiences on AI-powered innovations and aim to develop new solutions that serve the needs of the CCI and society at large, ultimately enhancing creativity-driven innovation.

Scope: The rapid development and deployment of artificial intelligence are increasingly permeating and transforming economy and society, notably impacting the diverse and dynamic domains of the CCI which, notably, are predominantly composed of SMEs. This transformation offers significant opportunities for innovation, within the CCI and in the economy and society at large, and poses challenges including bias, ethical dilemmas, employment shifts, skills need, and issues related to data access, transparency, preservation of cultural diversity and respect for creators' rights.

To foster a culture- and creativity-driven European innovation ecosystem, it's crucial to understand and address these impacts, build capacity to steer development, anticipate consequences, and prepare the CCI with the necessary skills to thrive in the new scenario. Enhancing the capabilities of the CCI in this rapidly evolving landscape increases innovation potential at the intersection of technology, arts, culture, and society.

Initiatives at the crossroads between art, technology, science, and society, such as the EU's STARTS – Science, Technology, and the Arts – demonstrate the advantages of involving artists and creative professionals to advance innovation and develop technologies that resonate with individuals and reflect cultural diversity. Artistic skills like intuition, imagination, and creativity, which are challenging for AI to replicate, along with expertise in design, visualisation, storytelling, to mention just a few, provide fresh ideas and unique insights for creating human-centric AI tools that address specific challenges and are designed to be ethical, sustainable, trustworthy, culturally sensitive and enhance user experience.

To address the multifaceted intertwining between AI and the CCI, and to foster a sustainable, innovative environment, the following areas could contribute to this topic's expected outcomes:

- Explore the impact of AI - including generative AI, and emerging AI systems - on CCI markets and audiences, ranging from individual artists and creators to processes, services, products, and consumer interactions.
- Investigate AI's current and potential applications within CCI that enhance creativity, innovation, and competitiveness.
- Focus on AI integration in those cultural and creative industries where it is most disruptive or most needed to optimise processes and reap business opportunities, identifying key risks, changes in employment and job profiles, and the need for upskilling, reskilling, and capacity building.
- Develop a sound understanding of how the intersection of CCI and AI can drive innovation both within the CCI and across other sectors, promoting business processes that respect and promote cultural diversity, foster the discoverability of European content and protect and reward human creativity.
- Investigate the underexplored potential of creativity and the arts to engage with AI developments and collaborate with AI specialists and third parties when appropriate. This can aim to design trustworthy, ethical, user-friendly intelligent systems that meet people's needs, enhance user experience, safeguard cultural diversity, address biases (including biases towards gender, sex, age, race or ethnicity, sexual orientation, and migrant status) boost CCI's competitiveness, and promote societal adoption of AI.
- Develop pilots, guidance, and innovative toolkits, including use cases, checklists, and algorithms, addressing CCI needs and values, cultural diversity, and the protection of intellectual property rights, including copyright and related rights.
- Facilitate interaction among artists and creatives, AI developers, cultural institutions, creative businesses, and third parties as appropriate, to promote knowledge transfer and enhance AI-powered innovation in CCI.
- Provide mechanisms or platforms for collaborations, peer learning, and knowledge sharing to build capacity and foster creativity-led innovation, while integrating humanistic perspectives into AI through dialogues that blend creativity and the arts with AI communities within research, policy, and practice.
- Assess the role cultural organisations can play in training AI systems in their areas of competence to represent multilingualism and cultural diversity in digital environments and to foster accessibility, and the extent to which AI contributes to their value creation, enhancing traditional methods and practices and personalising engagement with their public.
- Devise strategic recommendations for policies and practices that foster a mutually beneficial relationship between AI and CCI, propose fair rights management solutions and address employment, skills, and innovation challenges.

Proposals should involve from the outset representatives from the CCI, including the arts and cultural heritage, to ensure their central role in activity development. Proposals need not cover all CCI but may focus on a specific area for thorough analysis to develop a strong knowledge base and highlight strategic directions and routes to improvement.

Proposals should, to the extent appropriate, build on existing knowledge, activities, and networks, especially those funded by the European Union. They should seek complementarities with relevant projects funded under Horizon Europe Clusters 2 and 4¹¹³ and explore synergies with projects dealing with AI and the cultural and creative sectors and industries, funded by other EU programmes like Creative Europe, and Digital Europe.¹¹⁴

HORIZON-CL2-2025-01-HERITAGE-05: Evolution of culture in a virtualising world

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 2.50 and 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹¹⁵

¹¹³ For example: HORIZON-CL2-2024-HERITAGE-01-03: Leverage the digital transition for competitive European cultural and creative industries; HORIZON-CL2-2024-HERITAGE-01-02 and HORIZON-CL2-2023-HERITAGE-01-02: Cultural and creative industries for a sustainable climate transition; HORIZON-CL4-2021-HUMAN-01-24 - Tackling gender, race and other biases in AI.

¹¹⁴ Proposals can leverage the data and services available through the research infrastructures included in the European Strategy Forum on Research Infrastructures (ESFRI) and the ESFRI roadmap and those federated under the European Open Science Cloud, as well as data from relevant Data Spaces, including the common European data space for cultural heritage. They could also explore digital infrastructures, including the Alliance for Language Technologies European Digital Infrastructure Consortium (ALT-EDIC). Any data produced in the context of this topic should be FAIR (Findable, Accessible, Interoperable and Re-usable).

¹¹⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- A deepened understanding is developed and made available to researchers (including from SSH disciplines), policy-makers and industry professionals of the possible key long-term impacts on culture¹¹⁶ when citizens spend ever more time and experience an ever-larger share of life events in virtual worlds¹¹⁷, including benefits and risks in relation to human wellbeing, European values, social cohesion and cultural and linguistic diversity.
- Research and knowledge-based measures with a long-term view are developed and put in practice that guide development towards realising the opportunities linked to the virtualisation of life while mitigating the most important threats.
- Significant contributions are made towards making Europe a global leader in virtual worlds that contribute to wellbeing, social cohesion and resilience in addition to competitiveness and growth.

Scope: As technology improves, attractive content is developed and virtual worlds become more accessible, European citizens will spend ever more time and experience an ever larger share of important life events in virtual and blended environments. Leading multinational companies as well as the European Union are making great efforts to accelerate this development, whereby it is the ambition of the European Union to create a thriving and world-leading European industrial ecosystem for virtual worlds¹¹⁸.

As life thus becomes ever more virtualised, in the long term this will inevitably lead to drastic changes in perceptions, beliefs, behaviours and values. Culture will evolve; possibly new elements of culture will be born while old ones disappear. Creativity, cultural production and access to culture will have an ever-greater virtual component, changing the playing field for cultural heritage institutions as well as for cultural and creative industries. European creators will have new ways to create, promote and disseminate European cultural content and engage widely with new audiences.

The development towards virtualisation of life is not entirely new. For instance, gaming communities exist since many years, where members spend large parts of their lives online, and where virtual economic and social ecosystems can be said to have evolved. However, the scale and breadth of the virtualisation of most aspects of human life that is to come will have cultural impacts many orders of magnitude stronger than has been experienced thus far.

¹¹⁶ In the context of this topic, ‘culture’ should be understood in a holistic sense, along the definition proposed by UNESCO in 2001: “the set of distinctive spiritual, material, intellectual and emotional features of society or a social group, that encompasses, not only art and literature but lifestyles, ways of living together, value systems, traditions and beliefs”

¹¹⁷ In the context of this topic, ‘virtual worlds’ should be understood as persistent, immersive environments, based on technologies including 3D and extended reality, which make it possible to blend physical and digital worlds in real time, in line with the Communication COM(2023) 442 ‘An EU initiative on Web 4.0 and virtual worlds: a head start in the next technological transition’

¹¹⁸ See for instance the above mentioned COM(2023) 442 ‘An EU initiative on Web 4.0 and virtual worlds: a head start in the next technological transition’

It is therefore of great importance to deepen our knowledge and understanding of the long-term effects on culture when people spend ever more time in virtual and blended environments - for work, entertainment, playing, studying, socialising, etc. Research should explore both benefits and risks in depth, based on a thorough understanding of what is realistically possible and probable in a long-term perspective. Key opportunities and threats should be identified in relation to the EU's ambition to strengthen human wellbeing, sense of purpose and agency, as well as social cohesion, resilience and growth.

Based on research findings and scientific knowledge, projects should furthermore develop measures that would help realise the opportunities of cultural evolution in virtual and blended worlds, and mitigate the most important threats. Projects should, to the extent reasonably possible, make sure that findings and proposed measures are valid and feasible across the cultural diversity of Europe.

Proposals are not expected to address all aspects of the virtualisation of life, but should choose a focus that has the potential to bring decisive benefits, and should make sure to analyse these areas with sufficient depth to create a solid knowledge base.

Proposals should, to the extent appropriate, build on existing knowledge, activities and networks, notably the ones funded by the European Union. In particular, projects may want to establish links to the future European Partnership on Virtual Worlds, and may want to build on findings developed by relevant past and/or ongoing Horizon Europe projects¹¹⁹.

INNOVATIVE

HORIZON-CL2-2025-01-HERITAGE-06: Europe as a global powerhouse of design for sustainable competitiveness

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.50 and 4.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 13.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions

¹¹⁹ Such as project 'OPENVERSE': <https://cordis.europa.eu/project/id/101135701>

	under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹²⁰ .
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Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Enhanced and updated understanding of the European design ¹²¹ sector and design professionals, including its cross-sectoral relevance for innovation and key strengths, opportunities and challenges, is made available to scientists, policy makers, designers, private companies and other key stakeholders.
- Methods, techniques and applications based on research and knowledge that enable the European design sector and design professionals to stay at the forefront of design for sustainable competitiveness¹²² are developed and put into practice.
- Significant contributions are made to boost Europe as a global powerhouse of design for sustainable competitiveness.

Scope: Innovation and competitiveness are driven to an ever-greater degree by cultural dimensions and creativity. Successful new digital and physical products and services need to be not only functional but also appealing and attractive, adapted to cultural traits and market needs.

The process of creating or adapting products, services, processes or business models to human needs and desires, commonly called design, is key not only for competitiveness but also for environmental sustainability and cultural affirmation. It is widely acknowledged that the environmental impact of a product is largely determined at the design stage. The same also holds for digital products or services.

Building on Europe's world-renowned cultural heritage, well-educated and talented workforce, craftsmanship and strong creative traditions, European design is in many ways considered world leading. Large parts of the European economy rely on top-notch design for competitiveness, such as for instance luxury and high-end goods, fashion or the automotive

¹²⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹²¹ In the context of this topic, 'design' should be understood as the process of devising or adapting products, services or organisational and business models to the needs and desires of humans. As a reference, applicants may also refer to the scope of specialised design activities and professions as identified by Eurostat under the NACE classification Revision 2.1 (Regulation 2023/137)

¹²² Sustainable competitiveness builds on productivity growth, environmental sustainability, macroeconomic stability and fairness. See for instance COM(2023) 168 final 'Long-term competitiveness of the EU: looking beyond 2030'

industry. It is estimated that design-intensive industries employ around 27 million persons in the EU, representing around 13% of total employment and more than 15% of GDP¹²³.

Despite its outsize importance for future prosperity and societal and planetary wellbeing, design and its role in driving innovation and competitiveness have not been sufficiently researched. While being one of Europe's key competitive strengths, the European design sector and design professionals are structurally vulnerable and face a challenging pace of drastic changes. For instance, ever more powerful 'generative artificial intelligence' tools become capable of automating tasks previously requiring high levels of skills, while challenging new expectations in terms of reducing the environmental impact of products and services are added.

The challenge is to deepen evidence-based understanding of the European design sector and design professionals, and devise effective methods to strengthen the sector and make Europe a global powerhouse of design for sustainable competitiveness. Such methods may include new or adapted technological solutions, conceptual frameworks as well as innovative business models¹²⁴ and policies. The proposed solutions should to the extent possible be effective as well as economically and politically feasible and culturally acceptable across the diversity of EU member states and associated countries, as well as across different economic sectors. Thus, a wide range of stakeholders should be involved, in accordance with the focus chosen.

Proposals are not expected to address all aspects, subsectors or applications of design, but should choose a focus that can be expected to deliver a significant impact.

Solutions may involve the use of platforms or networks to facilitate sharing investments, facilities or competencies among actors. In such cases, established platforms, networks or clusters should be taken into account, to avoid duplication of efforts.

Proposals should, to the extent appropriate, build on existing knowledge¹²⁵, activities and networks, notably the ones funded by the European Union. In particular, findings and results from projects funded under the topics 'Cultural and creative industries for a sustainable climate transition' of the 2023 and 2024 calls of Horizon Europe Cluster 2 may be taken into consideration, and cooperation may be sought with the collaborative platform 'EKIP'¹²⁶ or its successor.

HORIZON-CL2-2025-01-HERITAGE-07: Cultural Strategies for Peace: culture and creativity as catalysts for conflict prevention and post-conflict reconciliation

Call: Culture, Creativity and Inclusive Society - 2025

Specific conditions

¹²³ See for instance European Union Intellectual Property Office, Report 'Women in Design' (April 2023).

¹²⁴ Such innovative business models may be based on 'circular economy' principles and design for circularity.

¹²⁵ For instance the work of the Open Method of Coordination (OMC) working group of Member States experts on "Stimulating the green transition of cultural and creative sectors" might be relevant.

¹²⁶ See further <https://cordis.europa.eu/project/id/101112111>

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹²⁷.</p>

Expected Outcome: Projects should contribute to all the following expected outcomes:

- Organisations active in diplomacy, culture, research (including SSH disciplines), and education gain insights into the strategic importance of culture, including cultural heritage and the arts, in the contemporary geopolitical context. They understand better how culture can be manipulated, instrumentalised, and even destroyed, to fuel conflict, and how culture, the arts, and tangible and intangible cultural heritage contribute to conflict prevention, reconciliation, preparedness, security and sustainable peace.
- Public authorities, international organisations, NGOs, and society benefit from the empirical knowledge base derived from extensive case study collection, analysis, and evaluation, and from the identification of patterns and best practices, offering adaptable models for integrating culture into sustainable peacebuilding, conflict prevention, preparedness and post-conflict reconciliation.
- Policymakers receive evidence-based recommendations and guidelines for innovative, sustainable peacebuilding strategies working with culture and aligned with EU principles and values.
- Mechanisms fostering ongoing collaboration among researchers, practitioners, and policymakers are established, to ensure sustained progress in culture for security, foreign policy, and sustainable peace, and to support continuous advancement and integration of knowledge beyond the projects' conclusion.

¹²⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope: Rapidly evolving geopolitical dynamics place the EU amid escalating conflicts and emergent crises, requiring an innovative approach to security frameworks, foreign policy, and peacebuilding strategies. R&I actions can develop groundbreaking solutions for the future, fostering innovative approaches to security and foreign policy. Integrating culture, including cultural heritage and the arts, into these frameworks could contribute to long term peace and stability by preserving community identity and history, enhancing communities' preparedness to crises, facilitating dialogue, reconstructive learning, reconciliation, and social cohesion. International cultural relations need to adapt to contemporary and future challenges by leveraging innovative strategic approaches to culture to facilitate dialogue, promote mutual understanding, and address socio-cultural disparities fuelling conflicts. The arts and culture offer unique avenues for expression, communication, and trust, transcending socio-political barriers and fostering non-violent strategies for social change, while supporting the preparedness of citizens in case of major disruptions.

Addressing the innovative role of culture in conflict prevention, security, preparedness, resilience, and post conflict reconciliation calls for a fully interdisciplinary approach, drawing from a rich variety of disciplines.

Since 2016, the EU has established a policy framework for international cultural relations heading towards a comprehensive strategy¹²⁸ and initiating pilot projects, preparatory actions, and flagship initiatives alongside numerous ground projects. The European External Action Service Concept and the Council Conclusions on the EU approach to cultural heritage in conflicts and crises (2021) emphasize integrating cultural heritage protection into broader security and peacebuilding frameworks. Proposals should map relevant actions and initiatives led by European institutions, international organisations, individual States, and civil society organisations in Member States and Associated Countries, including those from partnerships in international cultural relations. Analysing these initiatives will build an empirical knowledge base, serving as models and inspiration, and provide insights into different approaches under various circumstances, enhancing understanding of what works best for specific purposes, as well as identifying gaps.

To pursue the expected outcomes, proposals might, by way of example:

- Identify successful approaches to integrating cultural heritage as a strategic asset into foreign policy and security frameworks. Explore the potential of cultural heritage as common ground for conflicting parties, contributing to social fabric reconstruction and long-term stability in conflict-affected regions. Examine intangible cultural heritage and traditional knowledge as sources for peacebuilding strategies, fostering people-to-people connectivity, cooperation, and trust.

¹²⁸ European Commission, High Representative of the Union for Foreign Affairs and Security Policy, Joint Communication to the European Parliament and the Council "Towards an EU strategy for international cultural relations", Brussels, 8.6.2016 JOIN (2016) 29 final; Council conclusions on an EU strategic approach to international cultural relations and a framework for action (2019/C 192/04).

- Explore strategies and approaches at the intersection of art and culture, emergency management, and community resilience, with a view to increase preparedness before, during and after crises.
- Collect and analyse case studies of peacebuilding initiatives involving cultural and creative expressions and the arts, including bottom-up practices.
- Analyse current policies to identify gaps and opportunities for integrating culture and peacebuilding into security and development frameworks. Develop policy guidelines and frameworks to help policymakers incorporate cultural strategies into peacekeeping, security and social development agendas.
- Explore digital technologies for enhancing cultural exchange and dialogue in peacebuilding. Explore the imaginaries, narratives, and metaphors currently prevalent in the AI sector, and consider how the development of AI systems could be enhanced to better support cultural diversity, intercultural understanding, and ‘digital humanism’ to promote peace, safety, and fairness.
- Develop metrics for evaluating the impact of cultural initiatives on peacebuilding, preparedness, and conflict resolution. Conduct empirical studies to measure long-term benefits of these programmes on economic stability, social cohesion, and well-being in conflict-affected areas.
- Investigate how culture can be manipulated, instrumentalised and exploited to provoke conflict, including the tactical use of cultural identity and cultural appropriation to incite tensions. Investigate how cultural heritage of troubled pasts can be approached, providing new insights on how co-existence narratives of the past can contribute to reconciliation, reconstructive learning, and mutual understanding. In this respect, complementarities with topic HORIZON-CL2-2025-01-HERITAGE-08 might be sought.
- Collect and analyse good practices related to leveraging cultural heritage, culture, and creativity to address societal challenges such as fragmentation, polarisation, rising extremism, migration, the refugee crisis, and regional and local tensions.
- Investigate how intersectional factors such as gender, age, citizenship, and socioeconomic status affect participation in and outcomes of cultural peacebuilding initiatives. Assess the differential impacts on various demographic groups and develop strategies for inclusivity. Evaluate the role of cultural institutions and practices in restorative and transformative justice.
- Conduct longitudinal studies to assess long-term effects of cultural interventions on community resilience, social cohesion, and economic recovery in post-conflict regions. Identify key determinants of sustainability of cultural peacebuilding efforts and consolidate understanding of how to sustain peace once achieved.

- Investigate the link between culture, cultural heritage, and sustainable economy, examining their effects on post-conflict recovery, reconstruction and sustainable peace. Conflicts damage local economies, leading to exploitation of natural and cultural heritage for sustenance. These activities, often illegal, may generate quick profits but undermine long-term economic stability.
- Establish sustainable collaboration mechanisms to ensure continuous engagement among key stakeholders, researchers, practitioners, and policymakers, including in diplomacy, promoting robust and long-lasting exchange and cooperation.

International cooperation, as well as synergies with the Jean Monnet project HER-UKR: Challenges and opportunities for EU heritage diplomacy in Ukraine¹²⁹ are encouraged.

The Commission encourages projects funded under this topic to seek complementarities for stronger impact. Proposals should, to the extent appropriate, build on existing knowledge, activities, and networks, notably the ones funded by the European Union, in particular under the Horizon Europe framework programme¹³⁰.

HORIZON-CL2-2025-01-HERITAGE-08: Bridging historical past and future potential through conservation, preservation, and adaptive use of Europe's contentious and dissonant heritage

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 2.50 and 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If eligible for funding, legal entities established in non-associated third countries may exceptionally participate in this Coordination and support action as a beneficiary or affiliated entity.</p>

¹²⁹ <https://www.kuleuven.be/her-ukr>.

¹³⁰ Where applicable, proposals could leverage the data and services available through the research infrastructures included in the European Strategy Forum on Research Infrastructures (ESFRI) and the ESFRI roadmap and those federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹³¹.</p>

Expected Outcome: Projects should contribute to all the following expected outcomes:

- Dialogues between academics, local authorities and communities are strengthened by a Strategic Research and Innovation Agenda identifying trends, drivers, gaps and opportunities and highlight the added value for further research in this area.
- Academic researchers and practitioners (including from SSH disciplines) collaborate to apply tangible research findings in real-world contexts, addressing challenges posed by contested heritage, threatened by neglect, deterioration or abandonment.
- Cultural and Creative Industries (CCIs)¹³² and local authorities have access to innovative solutions to revitalise and reconsider contested cultural heritage to ensure its preservation, conservation, and adaptability for use while engaging future generations in tackling complex historical challenges.
- Policy makers and public authorities are equipped with actionable recommendations to tackle the lack of awareness on contested heritage, with a focus on education and sustainable cultural tourism as key areas for action.

Scope: Europe's rich heritage includes numerous objects, documents in libraries, museums, and archives, but also sites and cultural landscapes that recall complex and often troubled pasts. These heritage assets, often contested and frequently neglected or at risk of deterioration or abandonment, pose significant challenges for preservation, conservation, interpretation, and engagement. Gaining a better understanding of the dissonance and contestation surrounding cultural heritage assets is crucial not only for safeguarding memory and heritage but also for fostering historical understanding, cultural dialogue, and reconciliation on persisting dissonances.

¹³¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹³² CCIs as defined in the European Parliament Resolution 'A coherent EU policy for cultural and creative industries': <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016IP0486&from=EN>

Proposals should explore the multiple perspectives on troubled pasts and their impact on cultural heritage, with a focus on heritage assets connected to colonial, totalitarian and authoritarian regimes which may be linked biased or discriminatory beliefs. By engaging with such complex and often painful legacies, proposals should contribute to a broader reflection on participatory approaches in cultural heritage governance. Proposals are also encouraged to adopt a gendered and intersectional approach to advance gender equality and build more inclusive societies. Furthermore, the interplay between culture and nature in managing cultural landscapes is also crucial, requiring a balance between human and environmental values to ensure sustainable preservation.

Proposals should establish a collaborative and multidisciplinary network of professionals. It could rely on expertise from given disciplines and fields, such as: anthropology, history, heritage science (focused on conservation and exhibition and museum curation), media and intercultural communication, political science and science education. Researchers and experts with thematic expertise in the field(s) of memory studies, war and conflict, decolonisation, post-totalitarian regimes, and/or intersectionality could bring an added value. The integration of cultural and creative industries and local authorities could contribute to ensure the real-world applications of this research network.

This collaborative network should develop a comprehensive Strategic Research and Innovation Agenda for the preservation, conservation, transmission, and adaptive reuse of contested and dissonant heritage across Europe. This agenda should identify trends, clear drivers, gaps and opportunities to highlight the added value of complementary research activities or initiatives in this field. The proposed consortium should have an active role in promoting critical dialogues on remaining controversies and their lasting impacts on contemporary societies. Proposals should provide an assessment offering policy recommendations for the documentation, revitalisation (such as better understanding preservation, restoration, transmission, and transformation) and adaptive reuse of dissonant and contested heritage assets to preserve historical and cultural values. The recommendations should support public administrations, particularly local authorities, and the Cultural and Creative Industries in managing contested heritage and engaging with local community.

Proposals should shape recommendations to leverage contested objects, documents, sites and cultural landscapes for educational and cultural tourism purposes, ensuring historical understanding, cultural dialogue, and reconciliation. To address the challenges posed by these heritage assets, proposals should integrate innovative approaches that prioritize sustainability and preservation for future generations.

Proposals could aim to develop educational programmes to target various audiences, including young people, local communities, and international tourists to ensure the engagement of future generations in tackling complex historical challenges. Pilot programmes could be implemented to assess the effectiveness of these tools and recommendations. Public bodies with an interest in supporting the long-term sustainable use of these educational tools could be involved in these efforts.

Recommendations for the integration of contested and dissonant heritage assets into sustainable tourism practices that respect their sensitive nature and contribute to the sustainable development of local communities, is another aspect that should be considered in the strategic agenda. Utilizing existing digital tools and platforms to promote virtual tours, augmented reality experiences, and interactive educational content, making these heritage assets accessible to a broader audience and enhancing visitor experience could be considered as an added value.

While shaping the above-mentioned Strategic Research and Innovation Agenda, the proposal should identify key EU-funded projects contributing to this research area and suggest how to strengthen collaboration and networking in this field. It could also use results from existing evidence-based research, including insights from EU-funded projects. For that purpose, proposals are encouraged to network with and build on previously funded projects under Horizon Europe, in particular HORIZON-CL2-2023-HERITAGE-01-04 Cultural heritage in transformation – facing change with confidence calls, HORIZON-CL2-2024-HERITAGE-01-04 Europe’s cultural heritage and arts – promoting our values at home and abroad, Horizon 2020 or other EU programmes, e.g. Global Europe¹³³ as appropriate. Applicants are also encouraged to consider the services offered by the European Research Infrastructure for Heritage Science¹³⁴.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

International cooperation is encouraged.

HORIZON-CL2-2025-01-HERITAGE-09: Impacts of culture and the arts on health and well-being

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility</i>	The conditions are described in General Annex B. The following

¹³³ https://ec.europa.eu/international-partnerships/global-europe-programming_en

¹³⁴ <https://www.e-rihs.eu/>

<i>conditions</i>	exceptions apply: If eligible for funding, legal entities established in non-associated third countries may exceptionally participate in this Coordination and support action as a beneficiary or affiliated entity.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: The granting authority can fund a maximum of one project.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹³⁵ .

Expected Outcome: Projects should contribute to all the following expected outcomes:

- Policy makers at European, national, regional and local level from the health, culture, social care, relief/ humanitarian, youth and education sectors are aware of the impacts of arts and culture on health, well-being and social cohesion and are equipped with policy recommendations and with practical guides on to implement cross-sectorial policies and programmes in this field;
- Stakeholders from the health, culture, social care, relief/ humanitarian, youth and education sectors are aware impacts of arts and culture on health, well-being and social cohesion and are equipped with tools to implement cross-sectorial projects in this field;
- Research gaps in this field are documented and explained, and further the R&I implementation science (including in SSH disciplines) by presenting new scalable and replicable best practices;
- Policy-makers working in international relations/ cooperation are provided with recommendations for promoting EU priorities, culture and fundamental values abroad through the angle of cooperation in the areas of culture, health and well-being.

¹³⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope: An Open Method of Coordination expert group is working on culture and health in 2024, building on the preparatory action “Bottom-up Policy Development for Culture & Well-being in the EU¹³⁶” (2022-23)

There has been a major increase of research into the effects of culture and the arts on health and well-being¹³⁷, alongside developments in practice and policy activities in different EU countries. A recent example is the covid-19 pandemic, which challenged individual and collective wellbeing in an unprecedented manner. Its consequences – particularly in terms of mental health – have been felt long after the conclusion of the crisis in medical and public health terms. The covid-19 pandemic has showed that culture may play a profound and fundamental role in our lives. Moreover, the war of aggression against Ukraine has recalled the importance of culture and arts for the mental health of forcibly displaced people.

The Commission Communication “A comprehensive approach to mental health” recognized the contribution of culture to mental health and well-being of individuals and society, for example through culture-based social prescribing and the fight against stigma. The EU Work Plan for Culture 2023-2026 recognises that “cultural activities have a positive impact on people of all ages and backgrounds, enhance people’s quality of life and increase the health and overall well-being of individuals and communities. There is also a significant economic impact.”

The objective of this topic is to reinforce and mainstream the foster cross-sectorial cooperation among cultural, health, social, youth, education and humanitarian/ relief sectors as well as researchers and academia of Member State and Associated countries. The proposals should include cultural and creative sectors at large and consider both the active and the receptive nature of cultural participation; a special attention should be given to analyse situations in which art and culture are disruptive for mental health or are polarizing, thus having an adverse impact.

They should:

1. Create a dedicated platform to enable policy discussions and exchange of knowledge on culture and well-being, as well as further increasing the connection between arts, culture, health, well-being and inclusion of all individuals into the society, particularly among the health and social care sectors.
2. Provide policy guidelines for implementation and evaluate mixed methods, arts and culture- based interventions that address one or more of the following areas (at least one intervention per area):
 - o health promotion;

¹³⁶ [Cultureforhealth.eu](https://cultureforhealth.eu)

¹³⁷ [The societal value of the arts and culture - Publications Office of the EU \(europa.eu\)](#)

- o mental health and well-being (with a focus on children and young people, but also including other population segments, such as working people suffering from burn-out);
 - o the ageing population;
 - o health and well-being of forcibly displaced people; and
 - o links between ill-health and patterns of inequality.
3. Create an evidence gap map of arts and health research and innovation within health promotion, illness prevention, trauma recovery, disease management, and/or disease treatment.

The proposals should collect new practices and policies, evaluate various types of art and culture interventions, in order to better understand their clinical effectiveness and their cost effectiveness. The proposals should develop convincing narratives from the point of view of arts and health economics, health policies and more widely, well-being economics. Well-being is considered here both from an individual and from a societal and community perspective, therefore social cohesion and inclusion should be considered a priority. Moreover, the proposals should allow to map existing research and innovation gaps, identify potential existing barriers and propose a mixed model for cooperation that will take into account participation at the local, national and regional level and the coordination of different sectors and stakeholders.

The proposals should include arts and culture organisations with experience in the area of cross-sectorial collaboration with the other sectors mentioned above.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

Destination Innovative Research on Social and Economic Transformations

Draft expected impacts:

Projects funded under this destination should contribute to the following expected impacts in the Horizon Europe Strategic Plan 2025-2027¹³⁸:

- Strengthening social and economic resilience and sustainability
- Boosting inclusive growth and reducing vulnerabilities effectively

The expected impacts reflect the two-pronged nature of the destination. On the one hand, research funded by this destination will improve the understanding of how the macro drivers of change (technological change, climate change, new global trade patterns, along with migration, human mobility, and other demographic changes) impact society and inform policy makers on how to mitigate negative consequences and harness newly created opportunities. The results obtained should improve the understanding of the interplay between different drivers of change and their social, ethical, political, and economic implications. The improved understanding of these challenges and their economic, social, and distributional impacts will fill in the research gaps while also inform the design and assessment of policies addressing existing and emerging challenges, including in the areas of education, well-being and mental health.

On the other hand, research and innovation investment should be geared towards deepening the understanding of how ongoing changes impact society, with a specific emphasis on the key objectives of boosting inclusive and sustainable growth and effectively reducing vulnerabilities, poverty and inequalities. This knowledge should provide valuable insights to policymakers to design and assess policies that effectively address vulnerabilities while capitalizing on emerging opportunities.

Overall, the destination's activities will help promote the EU's inclusive growth, resilience, and fair transition towards climate neutrality, by providing solid analytical evidence to implementing actions related to:

- The European Pillar of Social Rights, and its Action Plan with its three ambitious targets (78% employment rate, 60% of population with yearly training, and reduction of the number of people at risk of poverty and social exclusion by at least 15 million by 2030)
- the European Education Area and its EU-level 2030 targets
- The Union of Equality policies and strategies, including:
 - o the Strategy for the Rights of Persons with Disabilities 2021-2030, the European Accessibility Act (Directive 2019/882), and the European Disability Card.

¹³⁸ <https://op.europa.eu/en/publication-detail/-/publication/6abcc8e7-e685-11ee-8b2b-01aa75ed71a1/language-en>

- o The Gender Equality Strategy 2020 – 2025 and the Directive combating violence against women and domestic violence
- o EU Anti-racism Action Plan 2020-2025
- o The Strategic EU Framework for Roma Equality, Inclusion and Participation 2020-2030
- o The LGBTIQ Equality Strategy 2020-2025
- o The Strategy on the Rights of Persons with Disabilities 2021-2030
- The Communication on Demographic change in Europe: a toolbox for action
- The EU's just transition policy framework, in line with the 2040 Climate Target Plan, including the Just Transition Mechanism, the Social Climate Fund, and the Council Recommendation on ensuring a fair transition towards climate neutrality.
- The Council Recommendation on strengthening social dialogue in the EU.
- The European Child Guarantee
- The Council Recommendation on adequate minimum income
- EC Communication on a comprehensive approach to mental health
- The New Pact on Asylum and Migration and its accompanying actions, initiatives and legislation.

Applicants are encouraged to consider, where relevant, the services offered by the current and future EU-funded European Research Infrastructures, particularly those in the social sciences and humanities domain¹³⁹.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this research is FAIR (Findable, Accessible, Interoperable and Re-usable).

To maximise the impacts of R&I under this Destination in line with EU priorities, international cooperation is encouraged whenever relevant in the proposed topics.

Research on socio and economic transformations funded by topics in the Work Programmes 2025-27 will build upon its predecessors in Horizon 2020 and Horizon Europe and further push the boundaries of state-of-the-art knowledge. It will do so by further engaging with a vast array of stakeholders. Not only universities and research centers, but also social partners

¹³⁹ <https://ri-portfolio.esfri.eu/>
for example CESSDA - Consortium of European Social Science Data Archives

(trade unions and business organizations), civil society organizations, practitioners, VET providers, and SMEs.

The destination will rely on a carefully balanced mix of actions, to bring together the right mix of actors to achieve the highest quality research, while aiming at providing recommendations to policymakers at European, national, regional and local level that could have a beneficial societal and economic impact. In order to achieve this, it will maximise the feedback to policy and the dissemination and exploitation of research and innovation results and practices in the domain of social and economic transformations.

Proposals are invited against the following topic(s):

HORIZON-CL2-2025-01-TRANSFO-01: Tackling gender-based violence in different social and economic spheres

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.40 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.20 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁴⁰.</p>

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Collect data and analyse the prevalence and impact of gender-based violence (GBV), including tech-facilitated GBV, in different socio-economic contexts and legislative frameworks, and provide policymakers at regional, national and EU level with recommendations to address it.

¹⁴⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Support employers, policymakers, practitioners, and civil society organisations in their work on the prevention, protection, prosecution, and provision of services in addressing GBV, including through promoting best practice sharing, mutual learning and education material focused on consent.

Scope: Gender-based violence (GBV) is a prevalent issue, with 1 in 3 women in the EU having experienced physical and/or sexual violence, 22% of women in the EU having experienced violence by an intimate partner, and 55% having been sexually harassed.¹⁴¹ GBV has destructive consequences for individuals, organisations, the economy, and society as a whole. Gender-based violence is violence directed against a person because of that person's gender or violence that affects persons of a particular gender disproportionately. It can be sexual, physical, verbal, psychological, or economic and occur in different forms, including threats of such acts, coercion or arbitrary deprivation of liberty. However, important knowledge gaps remain on the prevalence and impact of gender-based violence across different social and economic areas. For example, in certain sectors, occupations and work arrangements, like night work, healthcare, hospitality, social services, emergency services, transport and education, workers are more exposed to violence and harassment, although comparable, intersectional data is often still lacking in these fields.¹⁴² While the restrictions imposed during the COVID-19 pandemic led to an increase in domestic violence, still little is known about the impact of the associated rise in teleworking on women's working conditions, including the safety of their working environment. Moreover, in sports, initial studies on sexual GBV showed that a significant percentage of female athletes in Europe are exposed to sexual harassment¹⁴³, but no comprehensive pan-European data is available on this.

Another research field, which requires further attention is the impact of tech-facilitated GBV, including non-consensual sharing of sexually explicit images, manipulated intimate images (e.g., deepfakes and other forms of generative AI), or child sexual abuse online, as well as the potential positive and negative use and effects of AI on GBV.

Therefore, proposals should look at gender-based violence in one or more of the following areas: 1) GBV in the world of work, 2) GBV in sports 3) GBV on online platforms.

Across these areas, proposals should take into account online and offline forms of gender-based violence, and consider intersecting factors, such as age, socio-economic and migrant background, disability, racial or ethnic origin, religion, geography, as well as gender identity and sexual orientation. Proposals should also address the role of bystanders and superiors in addressing gender-based violence and assess the availability and effectiveness of victim support. For data collection, proposals should make use of surveys, as well as administrative data, where available, to assess how public services respond to the needs of GBV survivors

¹⁴¹ European Union Fundamental Rights Agency, Violence against women: an EU-wide survey. Results at a glance, 2014.

¹⁴² Violence and harassment in the world of work: A guide on Convention No. 190 and Recommendation No. 206 International Labour Office – Geneva: ILO, 2021.

¹⁴³ See Recommendations and Action Plan from the High-level group on gender equality in sport: Towards more gender equality in sport. <https://op.europa.eu/en/publication-detail/-/publication/684ab3af-9f57-11ec-83e1-01aa75ed71a1/language-en>

and can foster a safe environment. Where appropriate, proposals should seek the involvement of law enforcement, prosecutors and judges, together with academia/SSH research to optimise input and uptake. For proposals addressing the world of work, the involvement of social partners is encouraged.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

The outcomes of this research will be particularly important in view of recent policy developments, including the EU's accession to the Istanbul Convention, the EU Directive on Combatting Violence against Women and Domestic Violence, Commission Recommendation on integrated child protection to protect children from all forms of violence, as well as the ILO Convention no.190 on eliminating violence and harassment in the World of Work.

Synergies with projects under the DAPHNE strand of the Citizens, Equality, Rights and Values (CERV) programme are encouraged. International cooperation is encouraged, in line with the Gender Equality Strategy for External Action (GAPIII).

HORIZON-CL2-2025-01-TRANSFO-02: Historical and regional analyses of industrial transitions and their lessons for ensuring a fair green transition

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.40 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.20 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁴⁴.</p>

¹⁴⁴ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link:

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Provide policymakers with an analysis of past and present industrial transformations and what successful policies and measures were used to combat their negative externalities.
- Improve the understanding on the mechanisms of regional responses (e.g. geographic mobility of labour) and provide policymakers with a set of recommendations for seizing the opportunities and smoothing the risks of the developments. Analyse and evaluate forms of collaborative and participatory approaches to the management and governance of transition processes, including through social dialogue and collective bargaining.

Scope: The geographic variation in the impact of the European Green Deal is crucially important. Even though the green transition will have a positive impact and will improve our societies in many respects, regions with sizable employment in coal mining or traditional vehicle manufacturing will be disproportionately impacted. The resulting labour market imbalances can be addressed by people's movements within and between countries and training and skilling policies adapted to regional contexts.

The current economic system favours urbanisation, with jobs and skilled labour now concentrated in large urban areas. However, many jobs needed for the transition towards carbon neutrality are not in the most urbanised regions. Further still, green jobs will not automatically be created in regions with declining industries (such as coal mining, traditional vehicle manufacturing, or maritime transportation ports).

One important field of research should be on mechanisms of geographic mobility of labour (of EU citizens and third country nationals), incorporating a gender perspective to understand how mobility patterns differ and influence workforce dynamics. This is particularly pertinent given the documented impact of gender occupational segregation on labour market outcomes.

Another important research avenue is firm adaptation. Much of the current research is focused on the closing of factories and the subsequent reallocation of labour. However, the great challenge of the green transition is how to prevent existing businesses from closing and to upgrade them in a circular, cost- and resource-efficient manner, and make them more competitive. There is, therefore, a need to study cases of successful transitions that may not involve closing of factories and the policies and practices that enabled them.

Past transitions can provide insight into how to handle economic readjustment in regions strongly impacted by the green transformations. The success of the green and energy transitions hinges on political feasibility. Research is needed to understand what drives feasibility across contexts and how it can be strengthened. Past transitions have forced regions and communities to diversify their economic models. In this regard, they bear many similarities to the green transition.

To ensure Europe will benefit from current transitions, proposals should employ a whole ecosystem approach and draw from a rich variety of (SSH) disciplines including history, sociology, economics, and geography. Proposals may focus on policies which favoured local job creation, upskilling, labour mobility, and business model diversification. Proposals may also focus on the experiences of workers to provide adaptation lessons for the current transitions. Another research perspective could be the role social conflicts and compromises linked with social partners and how these have shaped past transitions. Lastly, proposals may take into account other key megatrends such as labour-saving technological innovation or demographic changes and evaluate how those change in the context of past and current industrial transformations, and how these impact different groups disproportionately.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-CL2-2025-01-TRANSFO-03: Working time reduction: barriers, challenges, benefits and policy implications

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.40 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.20 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁴⁵ .

¹⁴⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Expected Outcome: Projects should contribute to at least three out of the four expected outcomes:

- Deepen the understanding available to policy makers, employers, trade unions and other stakeholders regarding the impacts and implementation of the working time reduction, including its implications on social, economic or environmental outcomes in the society.
- Provide policymakers with recommendations on the feasibility of implementing working time reduction across all types of economic activity and occupations while promoting positive macroeconomic outcomes;
- Provide relevant stakeholders (e.g. social partners, SMEs, large companies and public authorities) with recommendations and data on the enablers and barriers to successful implementation of working time reduction, including at employer and employee level.
- Improved understanding of the potential of working time reduction to increase employment and inclusion in the labour market by activating underrepresented groups, including women, the elderly, workers with disabilities and others.

Scope: Reduction of the working time, understood as a coordinated reduction in weekly working hours concentrated into an extra free day per week without a corresponding decrease in pay, has existed in the economic debate for more than a century, yet much of its potential impact on economic, social, and environmental aspects remains unexplored.

Recently, various initiatives at national, company, and sectoral levels have been launched to test the employment and societal outcomes of these reduced working arrangements. Past experiences generally show some positive evidence on workers' well-being and wages, with marginal impacts on employment levels, but mixed outcomes regarding productivity. Yet, understanding the feasibility of working time reduction across different sectors and occupations is key to assessing its impacts on inequality, societal fairness, and overall economic growth. Moreover, the gender perspective and impacts on workforce inclusion in the working time reduction context is an area that is yet to be thoroughly understood. There is a wide range of environmental outcomes from working time reduction to be also considered, including energy costs and savings, energy poverty, and consumption patterns.

More insights are needed to understand the full battery of enablers, barriers, benefits, challenges, and policy implications arising from implementation of working time reduction, including at organisational level, across a diverse variety of sectors.

While feeding into the expected outcomes, the research project should assess the impacts of working time reduction along at least two out of the three axes: economic, social, and environmental.

These may include but are not limited to the following channels:

- Social impacts on workers, including well-being at the workplace, health outcomes (including stress levels), work-life balance, gendered employment outcomes, labour market inclusion;
- Economic impacts, including effects on productivity, employment, economic growth, hiring and staff retention, absenteeism, firm costs, overall economic demand, innovation;
- Environmental impacts, including on energy expenditures and savings, energy poverty, emission reduction, consumption patterns, sustainable lifestyles.

Applicants are encouraged to employ a variety of SSH research methods, including quantitative micro-economic analysis or behavioural and other experimental research methods.

Proposers may consider the data offered by European Research Infrastructures in the social sciences domain¹⁴⁶.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-CL2-2025-02-TRANSFO-04-two-stage: Gender differences in career trajectories of parents and their implications for gender equality and family well-being

Call: Culture, Creativity and Inclusive Society - 2025 - Two-stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.40 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.20 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the

¹⁴⁶ ri-portfolio.esfri.eu/ri-portfolio/table/

	Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹⁴⁷ .
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Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Policymakers, social partners, and other relevant stakeholders have better understanding of gender differences in career trajectories of parents and their consequences for gender inequalities in the labour market and within households.
- Policymakers, social partners, and other relevant stakeholders have better understanding of links between parental career- and childcare-related decisions, family well-being, and different policy/institutional settings.
- Providing policymakers with effective policy options that help reduce gender gaps in labour market outcomes of parents and support family well-being.

Scope: Gender differences in career trajectories of parents account for large shares of gender employment and pay gaps. This is often referred to as child/motherhood penalties for women (as opposed to child/fatherhood premium for men).

The research proposals should identify key gender differences in careers of parents and assess how they affect at least some of the current gender gaps in socio-economic outcomes such as employment, entrepreneurship, choice of occupation, pay, career opportunities, working conditions, (mental) health, or poverty risks. The research should take an intersectional perspective, considering that career trajectories of women and men also depend on other individual and household characteristics, such as household composition (e.g. single parents), socio-economic status, gender identity (e.g. LGBTIQ parents), migrant background or racial or ethnic origin.

The proposals should assess key positive and negative consequences of different career trajectories of parents for families, taking into consideration the diversity of family arrangements, age and number of children (with emphasis on pre-school ages), quality and stability of family relationships, the availability of economic and social resources, and family well-being.

The proposals should analyse key drivers of parental career and household-related decisions, paying particular attention to the division of unpaid childcare within households, social and cultural norms and stereotypes, work cultures in different economic sectors and occupations, and institutional and policy settings (e.g. childcare, maternity/paternity/parental leaves and other work-life balance policies such as flexible working arrangements or telework).

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data

¹⁴⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

The proposals should:

- Explore the use of longitudinal data from administrative or survey sources on parental careers and/or children's well-being;
- Explore both individual and structural drivers of gender differences in career trajectories of parents through quantitative models;
- Provide in-depth insight into careers of mothers and fathers, and their implications for family well-being, through qualitative research and case studies.

Within the broad scope of SSH research described above, the proposals are encouraged to pay particular attention to:

- Exploring how specific features of early childhood education and care systems (e.g. quality, availability or affordability) affect child participation and family wellbeing;
- Exploring how child/parent friendly workplaces and organisational cultures affect parental careers and family well-being;
- Quantifying economic costs of child/motherhood penalties;
- Reflecting on how child/motherhood penalties affect women from migrant backgrounds, for example in the context of migration flows following the Russia's war of aggression on Ukraine;
- Investigating the impact of heteronormative norms, discrimination, and support systems on LGBTIQ parents' career trajectories and family well-being.

HORIZON-CL2-2025-01-TRANSFO-05: Improving fairness in the economy through a better understanding of undeclared and underdeclared work

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.40 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.20 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial</i>	The rules are described in General Annex G. The following exceptions

<i>set-up of the Grant Agreements</i>	apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁴⁸ .
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Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Policymakers and social partners have insights into the scope and/or characteristics of un(der)declared work or actors involved in un(der)declared work.
- Policymakers receive actionable advice on policy measures effective in reducing the prevalence of un(der)declared work and/or its adverse social consequences.

Scope: Un(der)declared work, as well as the evasion of compulsory payments linked to workers' remuneration (e.g. bogus self-employment to avoid payment to social security schemes) hinder fair social market economy and reduce the sustainability of social protection system.

The proliferation of disruptive technologies, the increased presence of third-country nationals in the Member States, as well as rapidly rising living costs are leading to higher volatility on the labour market, including an accelerated rate of change in the characteristics of labour demand and supply, and new forms of employment such as e.g. project work in the gig-economy. These circumstances are conducive to growing inequality on the labour market and a spread of unfair practices, including un(der)declared work and the evasion of compulsory payments.

The SSH research activities are expected to have a strong multidisciplinary aspect. Proposals should contribute to advancing research on the scope, volume and/or characteristics of un(der)declared work in the economy and/or the evasion of compulsory payments linked to workers' remuneration. Subsequent research activities should contribute to our understanding of the causes and main structural drivers behind actors' willingness to engage in un(der)declared work and/or the related evasion of compulsory payments. Moreover, the research project should contribute to the evidence-based assessment of policies seeking to tackle un(der)declared work and/or the evasion of compulsory payments.

The geographical focus of the research activities should comprise a group of economies with a heterogeneous prevalence of un(der)declared work. The proposals are encouraged to consider the impact of disruptive technologies (e. g. digital platforms, cloud computing,

¹⁴⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

generative artificial intelligence) on the proliferation and/or changing features of un(der)declared work.

The proposal may:

- focus on methods seeking to address social desirability bias in public surveys
- focus on experiments and/or counterfactual analysis to advance the measurement of the impact of policy interventions
- focus on mechanisms of efficient cooperation among national authorities responsible for tackling un(der)declared work
- explore opportunities for the use of machine learning in tackling un(der)declared work
- explore un(der)declared work in the platform economy and/or in new professions created in response to rapid technological change
- focus on un(der)declared work among mobile workers
- insights from behavioural research into drivers behind un(der)declared work and/or the evasion of compulsory payments.
- explore the potential for social-demographic or other typologies of undeclared work
- aim at a establishing a more systematic link between un(der)declared work and taxation system or social security system.
- examine gender and social stratification variations in the nature of un(der)declared work (e.g., occupational segregation, motives, working time patterns).

Clustering and cooperation with other relevant projects are strongly encouraged.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-CL2-2025-01-TRANSFO-06: Evaluation and use of evidence in education policy and practice

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.40 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.20 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁴⁹.</p>

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- New analysis and evaluation of education policy measures.
- Support use of SSH research evidence by education and training policy makers and practitioners.
- Enhanced culture of research and evaluation in education policymaking and among practitioners. Better understanding of the types of expertise and institutional settings that are more effective at informing education policies and practices with evidence.

Scope: The European Education Area¹⁵⁰ aims to improve access to quality education for all. The strategic framework for the European Education Area set the EU-level target: “*The share of low-achieving 15-year-olds in reading, mathematics and science should be less than 15%, by 2030*” (Council of the European Union 2021). The latest data (2022) suggest that the European Union average is much higher¹⁵¹ than 15% and that pupils from low socio-economic status face a considerably higher risk of low achievement than their peers from high socio-economic background. Student performance varies widely, with differences at the student, school and education system levels. Improving educational quality and closing gaps in learning outcomes are important societal issues, and a major challenge for education systems across the European Union. There is a research gap in the empirical evaluation of education policies and practices and the understanding of the circumstances under which they are most beneficial. There is also a gap in the translation of scientific evidence into practices in educational institutions.

¹⁴⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁵⁰ <https://education.ec.europa.eu/>

¹⁵¹ Data from the Programme of International Student Assessment (PISA) are used to measure progress towards the EU-level target and the latest data (2022) put the EU average at 26.2% for reading, 29.5% for mathematics and 24.2% for science.

The action must enhance interdisciplinary collaborations among researchers in education and engage diverse educational research disciplines from social sciences, the arts and humanities. The action must include the perspectives of policy makers and practitioners who look at similar topics from different angles. The action should analyse policies in at least one level of education, with a particular focus on transitions from the previous level of education and to the next. Proposals may choose to analyse and evaluate general measures for all learners or targeted and individualised support in inclusive settings. Involvement of authorities responsible for the education and training policies is essential and should be ensured. The action should enhance collaborations to improve the access of researchers to administrative data and other types of data, including surveys of children and young people, to develop new research approaches and perspectives. Therefore, close cooperation with authorities and/or other institutions owning the data is essential and should be ensured.

The action should analyse and evaluate policy measures in their context, using a mixed methods approach including qualitative and quantitative methods. Proposals can include an experimental design, using e.g. small, randomized control trials and quasi-experimental methods (such as difference-in-difference or discontinuity designs) to test the effectiveness of specific interventions in different contexts. Proposals can also include participatory research approaches. Complementarities with the projects funded under the topics HORIZON-CL2-2023-TRANSFORMATIONS-01-05, HORIZON-CL2-2023-TRANSFORMATIONS-01-06; HORIZON-CL2-2024-TRANSFORMATIONS-01-10 and Topic HORIZON-CL5-2023-D1-01-10 are encouraged.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-CL2-2025-01-TRANSFO-07: Impact of the learning environment and the use of digital tools in everyday life on key skills and competence development

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.40 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.20 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant</i>	The rules are described in General Annex G. The following exceptions apply:

<i>Agreements</i>	Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁵² .
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Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Provide analyses of the impact of digital tools in everyday life on wellbeing and how children learn.
- Provide analyses and evidence-based recommendations on how to provide opportunities for high quality education that uses digital technologies in ways that support the wellbeing of the school community (students, teachers and school leaders).

Scope: Digital devices and tools are an integral part in the lives of children and teenagers as they grow. There is discussion about the impact of the use of digital tools in everyday life on children's wellbeing (cognitive, emotional, social) and development, but the evidence is often piecemeal¹⁵³ Proposals should investigate the impact that the expansion and normalisation of children's use of digital technologies (including generative AI) in everyday life has on their learning, at a time in their lives when literacy and numeracy skills are developing, and during adolescence.

Proposals may select different target groups to investigate how intersecting factors influence children's experiences with digital tools, paying a particular attention to age, gender, disabilities, digital exclusion of marginalised groups, and socio-economic status. In this context, proposals should investigate how the school learning environment can support learning and identify effective interventions to support children's social emotional and academic needs. Proposals should focus on primary and/ or secondary general compulsory education, and they could choose to address one or several age groups.

While educational institutions cannot act in isolation, students spend thousands of hours within buildings, and the same holds for teachers and school leaders. Sustainable Development Goal (4.a.) emphasises the importance of physical learning environment in

¹⁵² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁵³ For example, mobile phones or smartphones could have a potentially unprecedented impact on children's development, as the frequency of engagement is likely to be high. Possible impacts include for example cognitive overload, increased distraction, altering memory and learning patterns, impact on sleep duration and sleep quality, on wellbeing among adolescent girls and boys, on wider social activities, such as sport or cultural activities, or on leisure. There are also concerns that excessive screen time can impact children's social and emotional development, leading to debates about the quality of their interactions. Recent findings from the PISA survey highlight a negative correlation between leisurely digital device use at school and academic performance.

education facilities. Proposals could investigate the impact of learning environments on education outcomes and how its design responds to changes in teaching and learning.

Proposals should propose methods that address the complex nature of the topic under study, the existing data and the rapid changes in the technological landscape. Proposals are encouraged to use mixed methods approaches, and deepen inter- and transdisciplinary research in education (including from SSH disciplines), involving multiple perspectives, with the aim to improve learning and educational settings. Proposals can choose on which aspect of student well-being (cognitive, emotional, social) and skill development they focus. Proposals should include the voice of children and young people through active and meaningful participation and other relevant stakeholders as part of the data collection.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-CL2-2025-01-TRANSFO-08: Improving mental health outcomes for people in education, training and work

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁵⁴.</p>

Expected Outcome: Projects should contribute to all of the following expected outcomes:

¹⁵⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Deliver scalable and replicable integrated person-centred interventions on mental health included blended ones, in a manner that they are transferable to the new contexts in education, training and work, and studying and comparing their impacts;
- Deliver integrated person-centred interventions to all segments of population and age groups, with a particular focus for the youth with mental health conditions to improve their education, training and work trajectories, in order to ensure all these people's inclusion into society;
- Provide relevant authorities, policy makers, key stakeholders and practitioners with viable tools to make evidence-based informed decisions for implementation to benefit mental health outcomes in education, training and work. This includes effectiveness studies as well as the delivery of data, including health economics data of the developed intervention(s) to further advance this policy area; and
- Provide quality evidence-based data to policy makers and research and innovation stakeholders to bridge the gap between mental health outcomes and related socio-economic transition.

Scope: In Europe, 84 million citizens ranging from the youth to ageing population of all socio-economic backgrounds of all genders, including vulnerable groups are suffering from various mental health issues in their everyday lives at home, at work, at school as well as in the virtual cyber-world. The mental health issues affect people in different ways and/or period(s) of their life course as well as the people who live, work and/or study in vicinity of these persons with mental health issues, and/or people who belong to their family, friends and/or social circuits.

The foundation of mental health is mostly laid in adolescence: half of all mental health conditions start by 14 years of age and most cases go undetected and untreated. The staggering figures show that the second leading cause for death of young people of 15-19 years is suicide after the road accidents.

Addressing and treating mental health conditions is therefore essential to improve the downstream impacts on education, training and work and future socio-economic outcomes. It also represents a long-term investment in public health.

Over the past years, many innovative solutions (supported EU Framework Programmes for research and Innovation and/or international, national, regional, and local initiatives) for tackling mental health problems have been developed. However, few interventions have been implemented at scale. There lacks evidence about the feasibility, acceptability and suitability of these mental health interventions at scale.

Building on innovative solutions supported by EU Framework Programmes for Research and Innovation and/or international, national, regional, and local initiatives, the challenges of the topic are:

- to significantly increase / scale-up the percentage of interventions that are actually used, and
- to involve families, individuals/communities, stakeholders and authorities, such as public services, civil society organisations in the development and implementation of interventions aimed at heterogeneous segments of population

Additional evidence is also needed about to which extent mental health interventions are actually cost-effective and cost-efficient – looking via various policy perspectives, e.g. education, training, working life, well-being and health. This would aid policy makers to decide on which one (or a combination) of the policy choices to use when weighing up policy choices in investment for education, training and work- related outcomes.

To ensure replicability, projects are required to specify clearly how they target primary prevention (benefitting an entire target group), and/ or secondary prevention (provided for vulnerable groups and individuals with existing mental health problems). The project design and implementation should clearly outline and justify who they are targeting with what types of interventions and in what type(s) of contexts.

Special attention should be paid to the visibility and communication of the research and innovation findings to direct beneficiaries of the intervention and their families, communities, wider publics and stakeholders from the start of the work.

Clustering and cooperation with other selected projects under this call and other relevant projects is strongly encouraged. Considering the complex design and implementation of these projects, it is expected that projects may take 4 years or more to deliver solid evidence for take-up by policy makers, practitioners and stakeholders, which also justifies an appropriate budget per project.

Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-CL2-2025-01-TRANSFO-09: Good practices for increased autonomy of persons with disabilities, including physical, mental, intellectual and sensory disabilities

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.40 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.20 million.

<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁵⁵.</p>

Expected Outcome: Projects should contribute to some of the following expected outcomes (minimum three outcomes):

- Develop innovative evidence-based policy approaches to promote the autonomy of persons with disabilities of any age and any origin of the disability or impairment.
- Develop practices that facilitate the full inclusion and participation of persons with disabilities in different areas of life, including education, family life, employment, living arrangements, leisure, arts, culture and sport on equal basis with others.
- Address the seamless use of accessible and assistive technology, including digital technologies and artificial intelligence, in the community and related services and infrastructure. If possible, identify specific measures and tools for different addressed areas of lives of persons with disabilities, such as education, recruitment, hiring, return to work, and independent life.
- Identify and compare the usefulness of different options for policies and measures aiming to increase the autonomy and quality of life of persons with disabilities, as well as the quality of life and well-being of their families, using a person-centred approach, taking into account the individual needs of persons with disabilities and ensuring their full enjoyment of human rights and fundamental freedoms on equal basis with others.
- Identify relevant actors to achieve effective results (public actors, civil society organizations, private sector, social economy actors, etc.) and explore their roles and interaction, with a view to assessing integration among different social, support and essential services (including e.g. transport or housing) necessary to promote autonomy and inclusion in the community.

¹⁵⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope: The UN Convention on the Rights of Persons with Disabilities¹⁵⁶ recognises the right to individual autonomy and independence for persons with disabilities, including the freedom to make their own choices. Ensuring this right requires a differentiated landscape of measures in all areas of society, including ensuring accessibility and quality person-centred support services.

Having affordable and community-based services and measures in place, which meet the individual needs of persons with disabilities, is a basic pre-condition for autonomy and independence. Social and support services and measures need to be inclusive and accessible for persons with disabilities of any age and with any disability. The proposals may focus on a specific disability or address several of them. Research (including from SSH disciplines) should address barriers and solutions with regard to specific disabilities to increase inclusiveness, decision-making and autonomy, taking into account the integrated and person-centred support provided by families. The role of the family as carers and as the first agent to promote inclusion needs to be addressed. Different solutions for accessible and inclusive housing could also be explored.

A key aspect of the autonomy and independence of persons with disabilities is the access to inclusive education, training, active labour market measures and employment in the open labour market. Promising support practices in these areas should be mapped, analysed and tested, including the integration and communication between different services for a user-centred approach.

European Education Area initiatives such as the Council Recommendation on Pathways to School Success¹⁵⁷ aim to address equity and inclusion in education. A wide range of actions and peer learning activities aimed at supporting inclusive education are also implemented, in particular through two European Education Area strategic framework Working Groups¹⁵⁸: Working Group on Equality and Values in Education and Training and Working Group on Schools – Pathways to School Success.

The proposals should consider the impact – including the impact on the self-esteem of persons with disabilities – of inclusive education versus special needs education or special schools/classes for promoting the autonomy of persons with disabilities. The proposals may also consider the role of special training and lifelong learning adapted to persons with physical, mental, intellectual or sensory disabilities.

New and innovative ways of increasing the autonomy of persons with disabilities need to be explored and tested with the objective to reduce inequalities, promote their full inclusion in society in different areas of life, including education, family life, employment, living arrangements, leisure, arts, culture and sport, and improve their quality of life, as well as the

¹⁵⁶ Article 1 of the Un Convention on the Rights of Persons with disabilities: *Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.* <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities>

¹⁵⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022H1209%2801%29>

¹⁵⁸ <https://education.ec.europa.eu/about-eea/working-groups>

quality of life and well-being of their families. This includes the use of assistive technology and other accessible digital technologies and artificial intelligence (AI) measures and tools to increase accessibility in society and overall communication, social participation and inclusion of persons with disabilities.

The possible loneliness, impact on emotional well-being and inactivity status of many persons with disabilities needs to be addressed when designing approaches to increase their autonomy and independence. Moreover, the higher risk of persons with disabilities to be exposed to abuse, neglect (including self-neglect), scams and aggression needs to be considered, including when disability is combined (from an intersectional perspective) with other conditions which may be a source of vulnerability (e.g. age, gender, migrant status, discrimination based on racial or ethnic origin). Loneliness and other mental health issues (e.g. burnout) suffered by family carers or other informal carers may be also considered.

Proposals should include civil society engagement and dialogue, for wider input and uptake. Proposals are encouraged to seek synergies and collaboration whenever possible with projects funded under the topic HORIZON-HLTH-2025-01-STAYHLTH-01: Improving the quality of life of persons with intellectual disabilities and their families. Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-CL2-2025-01-TRANSFO-10: Intergenerational fairness in the context of demographic change in the EU

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.20 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Legal and financial set-up of the Grant</i>	The rules are described in General Annex G. The following exceptions apply:

<i>Agreements</i>	Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁵⁹ .
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Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Enhance the understanding and engagement on intergenerational fairness among policy makers, researchers and citizens on future trends and drivers of intergenerational fairness in the EU through quantitative and qualitative analyses;
- Provide policy makers with scientific knowledge (including knowledge generated through SSH) and data for evidence-informed policies to address the drivers of intergenerational inequalities, tailoring interventions to diverse demographic groups, ensuring inclusivity across gender, ethnicity, and socioeconomic status;
- Develop an action plan to inform policy making, including a set of viable policies to adapt the European economic and social model to reduce intergenerational imbalances and help prevent them in the future, taking into account cross-policy synergies in terms of factors influencing intergenerational fairness.

Scope: Demographic trends over the last decade and future projections show that the share of the population aged 65+ is growing, both in comparison to the working-age population and to the child population. This is due to an increasing life expectancy and lower fertility and poses major challenges for intergenerational fairness and affects the implicit social contract across generations.

There is a growing need to provide an adequate framework for addressing fairness across generations (including knowledge on past generations, current and in particular future ones) related to education and labour market opportunities and outcomes, wealth accumulation and distribution of economic gains and costs, housing affordability, well-being and health, including environmental impact, role of institutions and public services, in the face of new challenges, such as ever-faster technological and climate change and changing public preferences.

- Proposals should provide in-depth analysis of at least 3 different drivers of intergenerational inequalities such as, but not exclusively, from the ones listed above, and the interdependence between them.

¹⁵⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Proposals should investigate intergenerational fairness, solidarity and trust through an intersectional lens, considering gender, family structure, racial or ethnic origin, socioeconomic and migration backgrounds.
- Proposals may have a regional and/or national dimension.
- Proposals may focus on developing and/or forecasting intergenerational fairness indicators.
- Proposals may draw lessons from recent policy interventions in EU Member States in a contextual and transdisciplinary manner and propose adjustment measures or test them through social innovation experiments.
- Proposals may focus on democratic participation and socially inclusive pathways to co-creating public values for current and future generations.

Clustering and cooperation with other selected projects under this call and other relevant projects is strongly encouraged.

Applicants are encouraged to consider the data offered by European Research Infrastructures in the social sciences domain, particularly SHARE (ri-portfolio.esfri.eu/ri-portfolio/table/). Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

Proposals should consider the involvement of the European Commission's Joint Research Centre (JRC) based on its experience and with respect to the value it could bring in providing an effective interface between research activities and policymaking.

HORIZON-CL2-2025-01-TRANSFO-11: Migration and climate change: building resilience and enhancing sustainability

Call: Culture, Creativity and Inclusive Society - 2025	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply:

	<p>If eligible for funding, legal entities established in non-associated third countries may exceptionally participate in this Coordination and support action as a beneficiary or affiliated entity.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁶⁰.</p>

Expected Outcome: Projects should contribute to all of the following expected outcomes:

- Strengthen EU and national migration governance by developing a dynamic knowledge database and an exchange platform, for enhanced collaboration among researchers, policymakers, and practitioners, promoting the integration of environment and climate change migration considerations into EU and national policies.
- Develop a strategic roadmap that outlines key research (including in SSH disciplines) and policy priorities addressing climate change and migration and supports implementation measures.
- Develop policy recommendations to improve the EU's understanding and preparedness, and to enhance collaboration between the EU and third countries within the frameworks of relevant EU policies.

Scope: Proposals should develop a strategic roadmap that will act as a comprehensive framework for understanding the impacts of climate change on migration and its impact on future generations and outline key research and policy priorities in the context of environmental degradation, climate change and migration.

Having developed such a roadmap, proposals should develop a dynamic exchange platform with up-to-date information, to be accessed by all concerned parties, involved in climate change and migration including EU and national authorities, researchers, policymakers, and

¹⁶⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

relevant stakeholders. This platform should be collaborative, user-editable, and community-driven, allowing for future updates and contributions from various stakeholders. It should act as comprehensive go-to place, a source repository, and a networking and coordination space, with a focus on integrating climate change considerations into migration policies. The platform should incorporate comprehensive data on migration patterns, including on international and internal displacements, on international destinations including neighbouring EU countries, and EU arrivals, and on climate change as a root cause or its interaction with other root causes, with the goal to inform policy decisions.

Proposals should identify gaps and set the groundwork for future research and policy initiatives. They should adopt an interdisciplinary approach integrating climate, population, and human mobility studies addressing the complex relationship between environmental disasters and migration intentions. They should encompass a broader analysis of vulnerabilities, such as internal displacements, how preexisting inequalities (e.g. social, economic, political, health, gender) are exacerbated due to climate change, and populations stranded in their countries of origin, aligning with EU's external policy frameworks for adaptation strategies¹⁶¹.

Proposals should consider the involvement of the Knowledge Centre on Migration and Demography (KCMD) operated by the European Commission's JRC¹⁶² with a view to be sustainable beyond the lifetime of the project. In particular:

- the structure and the format of the platform should be decided together with DG RTD, DG HOME and the JRC, and it should be built and hosted within the web environment of the Knowledge Centre on Migration and Demography as part of its knowledge management efforts;
- the development of the roadmap is encouraged to be developed in consultation with relevant stakeholders, particularly including with DG RTD, DG HOME and the JRC;
- findings and recommendations should be translated in very concise policy briefs, preferably in coordination with the KCMD.

Proposals could identify local case studies to perform context-specific analysis and extract actionable insights and scalable solutions that could inform broader migration and climate adaptation policies. These local case studies could explore the impact of climate change in different regions and the phenomenon of environmental immobility, where individuals are unable or unwilling to move despite facing significant environmental threats.

The proposals are strongly encouraged to look into the findings of completed Horizon 2020 projects on forecast and foresight, particularly from the topic 'MIGRATION-01-2019 - Understanding migration mobility patterns: elaborating mid and long-term migration scenarios', and wherever possible build on their outcomes and methodology¹⁶³. They are also

¹⁶¹ https://climate.ec.europa.eu/eu-action/adaptation-climate-change/eu-adaptation-strategy_en

¹⁶² https://knowledge4policy.ec.europa.eu/migration-demography_en

¹⁶³ https://cordis.europa.eu/programme/id/H2020_MIGRATION-01-2019/en

encouraged to build on the deliverables of project INNOVATE¹⁶⁴ and of relevant projects of Destination “Effective management of EU external borders” of Horizon Europe Cluster’s 3/Horizon 2020’ SC7, such as projects ITFLOWS¹⁶⁵, CRITERIA¹⁶⁶, MIRROR¹⁶⁷ and PERCEPTIONS¹⁶⁸, as well as the relevant use cases and pilots conducted as part of the Destination Earth initiative¹⁶⁹.

Proposals should consider incorporating in the platform the data provided by European Research Infrastructures, such as the European Social Survey¹⁷⁰ or other Research Infrastructures dealing with climate change and environment. Where applicable, proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

The selected project should produce a range of feasible policy recommendations. These recommendations should be based on evaluations of existing EU humanitarian aid, development and migration policies and drafted as policy options that are directly actionable, include cost considerations and explicitly recommend additions or modifications of current EU strategies, regulations, and directives. The option of non-action should also be elaborated. The recommendations should be firmly embedded in EU values such as respect for human dignity, gender and age equality, and fundamental rights.

¹⁶⁴ Beneficiary of the topic HORIZON-CL2-2023-TRANSFORMATIONS-01-04: Bridging the migration research to policy gap <https://cordis.europa.eu/project/id/101132593>
¹⁶⁵ <https://cordis.europa.eu/project/id/882986>
¹⁶⁶ <https://cordis.europa.eu/project/id/101021866>
¹⁶⁷ <https://cordis.europa.eu/project/id/832921>
¹⁶⁸ <https://cordis.europa.eu/project/id/833870>
¹⁶⁹ <https://destination-earth.eu/>
¹⁷⁰ ri-portfolio.esfri.eu/ri-portfolio/table/

OTHER ACTIONS not subject to calls for proposals

Public procurements

1. Studies, conferences, events and outreach activities

A number of specific contracts will be signed under existing framework contracts in order to: (i) support the dissemination and exploitation of project results; (ii) contribute to the definition of future challenge priorities; (iii) undertake citizen surveys such as Eurobarometers, (iv) carry out specific evaluations of programme parts; and (v) organise conferences, events and outreach activities. Should existing framework contracts prove unsuitable or insufficient to support the abovementioned activities, one or more calls for tender may be launched as appropriate.

Subject matter of the contracts envisaged: studies, technical assistance, conferences, events and outreach activities within the scope of Cluster 2 ‘Culture, Creativity and Inclusive Society’.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: 2025

Indicative budget: EUR 1.00 million from the 2025 budget

Other budget implementation instruments

1. Mobilisation of research funds in case of Emergencies 2025

This action will only be used in case of exceptional and duly substantiated emergencies as described in the scope section of the action.

Expected Impact: Proposals should set out a credible pathway to contributing to one or several expected impacts of the 3 destinations of Cluster 2 ‘Culture, Creativity and Inclusive Society’.

Expected Outcome: Projects should contribute to at least one of the following expected outcomes: Allow the Union to respond to emergencies in the field of:

- Democracy and governance, especially in the field of the rule of law, extremism, racism and/or foreign interference to democratic processes of the EU, its Member States, EU Neighbourhood and Candidate countries;
- Cultural heritage, cultural and creative sectors and industries, especially the protection of cultural heritage, provenance research and fight of illicit trafficking of cultural goods;

- Social and economic transformations, especially economic and financial shocks and unprecedented pressures on global supply chains, labour markets and social protection systems;
- Migration, refugee and asylum policies, especially unforeseen humanitarian crises caused by sudden migration and refugee flows and displacement of civil population.

Scope: Future emergencies, such as potential new, unexpected consequences of the unprovoked military aggression and invasion of Ukraine by Russia¹⁷¹, , consequences of other conflicts in Europe and its vicinity, or major events with societal impact (including, but not limited to, public health and climate-related ones), require the urgent mobilisation of Cluster 2 Research and Innovation stakeholders in order to assist European policy and decision-making with evidence, analysis and policy options, therefore funding will be mobilised for:

- The award of grants without a call for proposals according to Article 198 (b) of the EU Financial Regulation¹⁷² in exceptional and duly substantiated emergencies. At that time, the Funding & Tenders Portal will open a dedicated section where proposals can be submitted. This will be communicated to the National Contact Points. The invitation to apply for funding will be open to all eligible entities or be limited to targeted entities, taking into account the need to achieve the underlying objectives in a quick and efficient manner considering the exceptional circumstances.

Specific conditions:

- In order to ensure a balanced portfolio covering, grants will be awarded to applications not only in order of ranking, but also to those projects that enhance the quality of the project portfolio through synergies between projects and avoidance of overlaps, provided that the applications attain all thresholds.
- The action may also include justified derogations from the standard limits to financial support to third parties. Where applicable, the relevant grant agreement options will be applied.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant awarded without call for proposals according to Financial Regulation Article 198 (b)

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

¹⁷¹ Condemned on a global scale by the overwhelming majority of United Nations Member States in the Resolution of the UN General Assembly of 2 March 2022 (UN GA Resolution ES 11/1) and addressed by European Commission Communications COM(2022) 107 final and COM(2022) 131 final.

¹⁷² Article 198(b) of the Financial Regulation "Grants may be awarded without a call for proposals only in the following cases: [...] (b) in other exceptional and duly substantiated emergencies;".

Indicative timetable: Will depend on the emergency

Indicative budget: EUR 3.00 million from the 2025 budget

Indirectly managed actions

1. Observatory of Public Sector Innovation (OPSI) Phase 4

Expected Outcome: the project is expected to contribute to all of the following expected outcomes:

- Creation of new knowledge and expanding the horizon for public sector innovation: The project will significantly expand the frontier of public sector innovation knowledge with first-hand, in-depth research on emerging innovative approaches to tackle public challenges (from twin transitions to leveraging AI for public good) and will support governments with the application of that knowledge in internal government policy, service processes and practices.
- From theory to practice: The project will support governments in the creation of organizational frameworks, ways of working, rules, processes, coordination, and capabilities conducive to sustaining innovation within government administrations; preparation for anticipatory governance and adaptation to emerging challenges through innovative internal working methods, action research, and capability-building.
- Fostering multi-party collaboration and strengthening the network: The project will foster multi-party collaborative projects among networks of governments to build new knowledge, share good practices and jointly develop practical guidance for public sector innovation. OPSI will convene and facilitate high-level strategic reflections and extend existing networks by intensifying collaborations via common shared research and online tools, deepening the reach of innovation into core professional communities (such as policymakers and regulators, analysts, auditors, budget officials, etc) within national government administrations. The project will further expand and connect the public sector innovation community inside governments at EU, national, and sub-national levels.
- Taking stock of national governments' internal innovation efforts: The project will help expand the understanding of how national governments in the EU and Horizon Europe Associated Countries promote and facilitate innovation in their government through e.g. more granular mapping, policy-relevant and easy-accessible comparative data. This support will be aimed at producing a comparative outlook on public sector innovation in the EU and Horizon Europe Associated Countries as regards their internal innovation efforts, new governance practices, working methodologies, innovative policymaking practices (e.g. through experimentation, systems approaches, etc.). By engaging with the broader innovation system, governments will become better equipped to develop effective public policies, responsive public services, and co-create solutions to pressing societal challenges.

Scope: In this new era of rapidly emerging disruptive technologies, climate change, and mounting geopolitical, economic and societal pressures, governments are facing multiple, simultaneous challenges, and changes at national and global level. Governments must evolve to meet these multifaceted challenges, fostering resilience and adaptability through internal innovation efforts and positively impactful public sector reforms. This evolution will reshape administrative structures, redefine collaboration with other ecosystem players, and transform resource management and operational strategies—and it needs to be done while building trust and democratic legitimacy with constituents. It is essential to provide a framework for governments to exchange experiences, learn from one another and to be supported in their efforts of bringing innovative practices into the daily operations of their public administrations.

Activities that need to be conducted to attain the above expected outcomes are the following:

- Systematically identify and map potential enablers of innovation in public administrations through mechanisms like e.g. procurement, budgeting, and human resources management as points for innovation in public administration. Provide enriched sets of data on major trends and enablers with a view of distilling policy-oriented guidance. Explore how innovation can drive public trust in government, linking innovation with core public functions and leveraging insights from behavioural science.
- Define and support the next generation of public sector innovation labs, handle complexity and change, provide purpose-driven approaches to citizens'/societal challenges, and host exploratory and experimental methods and practices in public administrations. Gather up-to-date relevant data to go beyond normative approaches to innovation labs, drawing on experiences, challenges and opportunities for innovation labs at the global level. Design guidelines and instruments to support innovation labs to create value for people and lever innovation in Government. Test and compare models for delivering innovation across different governance contexts and at different scales. Specify frameworks and instruments to provide actionable and re-usable guidance to steer and support the embeddedness and sustainability of innovation labs in the public sector, as well as secure and improve high-level commitment and sponsorship.
- Revisit the core skills for public sector innovation and identify the factors that transform public administrations from talk into action. Evaluate and enhance modalities for capacity building in innovation, focusing on structures and practices that foster an authorizing environment for innovation, especially at senior management levels. Share learnings through structure knowledge-enhancing programs for civil servants, policymakers, public managers, and senior leaders.
- Broad-based and practical anticipatory innovation governance through actioning existing principles and developing new tools, such as those aimed at anticipatory intelligence collection and sharing, regular outlooks on the future of government, as well as case research on emerging trends and behavioural science, to help governments anticipate and navigate future changes.

- Strengthen multi-party projects via online platforms, extending its reach within national government administrations, and expanding the public sector innovation community at all levels. Disseminate the vast collection of practical knowledge through new channels and in new formats, leveraging behavioural science to reach audiences that are not already “innovation enthusiasts.”
- Design and support purpose-driven approaches for governments to address societal challenges, such as social inclusion. Strengthen existing methods and tools for the engagement of stakeholders from the broader innovation ecosystem for co-creation, co-delivery, and co-assessment of innovative policies and initiatives. Test challenge-based approaches for ecosystem engagement in order to demonstrate their potential benefits (and challenges) for public sector innovation, and share the lessons learned and related methodological resources.

The Observatory of Public Sector Innovation (OPSI) was established and managed by the OECD, co-funded by the Horizon Europe Programme (and other OECD countries) since 2015. Based on the results of the work and on the collaborations developed with the network of OPSI national contact points, the Observatory offers leading edge action research, related infrastructure and valuable support to governments investing in the development of internal innovation capabilities, strategies and practices within their government administrations. The OPSI shares a wealth of new knowledge and experience with OECD governments, including 24 EU Member States signatory to the OECD Declaration on Public Sector Innovation (2019). There is no other actor with the necessary infrastructure, state-of-the-art analytical capacity and data in international comparison, political processes and networks in place, and with access to this large constituent of governments of the world's leading economies that could do the work of this scale and scope. This action would enable the OECD OPSI to intensify, deepen and widen its work with governments in support of their internal innovation efforts.

Legal entities:

Organisation for Economic Co-operation and Development (OECD), 2, rue André Pascal, 75775 Paris Cedex 16, France

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative timetable: 2025

Indicative budget: EUR 1.50 million from the 2025 budget

Budget^{173 174}

	Budget line(s)	2025 Budget (EUR million)
Calls		
HORIZON-CL2-2025-01		275.10
	<i>from</i> <i>01.020220</i>	<i>275.10</i>
HORIZON-CL2-2025-02-TWO-STAGE		22.20
	<i>from</i> <i>01.020220</i>	<i>22.20</i>
HORIZON-CL2-2025-03		60.00
	<i>from</i> <i>01.020220</i>	<i>60.00</i>
Other actions		
Public procurement		1.00
	<i>from</i> <i>01.020220</i>	<i>1.00</i>
Grant awarded without a call for proposals according to Financial Regulation Article 198		3.00
	<i>from</i> <i>01.020220</i>	<i>3.00</i>
Indirectly managed action		1.50
	<i>from</i> <i>01.020220</i>	<i>1.50</i>
Estimated total budget		362.80

¹⁷³ The budget figures given in this table are rounded to two decimal places.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹⁷⁴ The contribution from Cluster 2 for the year 2025 is EUR 16.80 million for the Missions work programme part and EUR 3.06 million for the New European Bauhaus Facility work programme part.

EN

Horizon Europe
Work Programme 2025

6. Civil Security for Society

IMPORTANT NOTICE:

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

This draft is made public before the adoption of the work programme to provide potential participants with the currently expected main lines of this work programme. Only the adopted work programme will have legal value.

The adoption of the work programme will be announced on the Horizon Europe website and on the Funding and Tenders Portal.

Information and topic descriptions indicated in this draft may not appear in the final work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

The Commission expressly disclaims liability for any future changes of the content of this document.

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Introduction

Cluster 3 provides a research and innovation response to a context of rapidly changing threats and challenges to internal security, the security of citizens, critical infrastructure and the security of society as a whole. These threats are driven by geopolitical, technological and societal changes, including:

- Instability, hybrid threats and the resurgence of war on the European continent, in particular the Russian war against Ukraine, making the need for civilian protection, preparedness, and resilience a matter of urgency.
- Continued threat from terrorism and increased threat from organised crime.
- The potential for large-scale movements of people, whether due to war, the instrumentalisation of migration, or other drivers, requires effective border management capabilities and further efforts to combat migrant smuggling, trafficking in Human Beings (THB), and possible terrorist infiltration.
- More frequent and serious climate-related extreme events and other disasters, whether accidental or intentional, of human or natural origin, requiring disaster risk management and response.
- Continued technological development and digitalisation create new and unforeseen vulnerabilities and new opportunities for criminals and violent extremists, as well as new challenges, needs and opportunities for security practitioners.
- Cyber threats that put infrastructures, businesses and individuals at risk.
- Negative socio-economic trends and climate adaptation that create potential for greater social polarisation and mistrust, which may escalate into conflict and/or create opportunities for extremists and malicious actors to spread hate speech and disinformation.

In addressing these and their related challenges, this Work Programme will support the implementation of the upcoming EU's Internal Security Strategy and Preparedness Union Strategy, and the sectoral strategies, legislation and action plans identified in the introduction to each of the **Destinations**:

- **Better protect the EU and its citizens against Crime and Terrorism (FCT)**

Link to the Horizon Europe strategic plan 2025-2027: Expected impact 13 “Tackling crime and terrorism more effectively and increasing the resilience of infrastructures”.

- **Effective management of EU external borders (BM)**

Link to the Horizon Europe strategic plan 2025-2027: Expected impact 12 “Facilitating legitimate movement of passengers and goods into the EU, while preventing illicit acts”.

- **Resilient infrastructure (INFRA)**

Link to the Horizon Europe strategic plan 2025-2027: Expected impact 13 “Tackling crime and terrorism more effectively and increasing the resilience of infrastructures”.

- **Disaster-Resilient Society for Europe (DRS)**

Link to the Horizon Europe strategic plan 2025-2027: Expected impact 11. “Reducing losses from natural, accidental and human-made disasters”.

- **Strengthened Security Research and Innovation (SSRI)**

Link to the Horizon Europe strategic plan 2025-2027: Cross-cutting Destination that supports all the Expected impacts identified above.

Each Destination includes an introductory section that explains the relevant policy objectives, specifies elements to be taken into account for the topics of the Destination, and identifies specific expected impacts. Proposals should set out a credible pathway to contribute to the specific expected impacts.

In addition, under this Work Programme, the Commission intends to entrust implementation of a call for proposals to the European Competence Centre for Cybersecurity (ECCC). The call topics foreseen for this indirectly managed action (see Appendix to this Work Programme part) relate to:

- **Increased Cybersecurity (CS)** *Link to the Horizon Europe strategic plan 2025-2027: Expected impact 14 “Increasing cybersecurity and making the online environment more secure”.*

Cluster 3 Work Programmes will support the implementation of the European Commission political guidelines 2024-2029 for a ‘Safer and more secure Europe’, a ‘Preparedness Union’, with ‘Stronger Common Borders’, protecting democracy and putting research and innovation at the heart of a resilient economy. Overall, research under this Cluster should continue to focus on preserving and securing **citizens’ basic right to feel safe**. Cluster 3 ‘civil security for society’ will therefore also support the Commission’s work:

- towards a new European Internal Security Strategy, fighting organised crime and ensuring that security is integrated in EU legislation and policies by-design.
- to provide law enforcement with adequate and up-to-date tools for lawful access to digital information, while safeguarding fundamental rights and strong cybersecurity.
- to make better use of public procurement, particularly to support innovation procurement.

Successful projects need to show their understanding of and contribution to a wider innovation cycle based on a needs-driven capability development approach that triggers research, steers its implementation and capitalises on its outcomes. This means that projects

need to show, on the one hand, an understanding of the capability requirement and policy context that has led to the R&I need, and, on the other hand, a strategy for ensuring the uptake of the outcomes including opportunities where relevant for using EU funds for deployment.

Cross-cutting themes

Various themes run through this Work Programme, cutting across the different sectoral Destinations. A first set of themes respond to the wider challenges identified in the three key strategic orientations of the Horizon Europe strategic plan 2025-2027:

- *Strengthening resilient societies and democracy.* The central focus of Cluster 3 is supporting the prevention, preparedness and response to the wide range of threats to internal security identified above, as well as ensuring the security of citizens, critical infrastructure and of society as a whole¹. Strengthening our democracies and making them more resilient – both materially and psychologically – has taken on a new urgency since the Russian full-scale invasion of Ukraine. European citizens need to be protected from hybrid threats such as disinformation campaigns or fake news while upholding the rule of law and basic freedoms, including freedom of speech. Civil security research and innovation needs to equip civil security practitioners with the ability to mitigate the consequences of armed conflict, in particular attacks on critical infrastructures. By funding research to strengthen and prepare our societies, democracies, and infrastructure against hybrid threats, Cluster 3 shows its ability to adapt to changing conditions and challenges.
- *Securing the digital transition.* The more widespread and ubiquitous digital technology is, the greater the threats of new and unforeseen vulnerabilities and new opportunities for criminals and violent extremists as well as new challenges, needs and tools for law enforcement authorities, infrastructures, businesses and individuals. Research on cybercrime and cybersecurity helps to address these matters. With the aim of creating a secure and trustworthy digital environment, Cluster 3 will invest in cybersecurity R&I to strengthen the EU's resilience, protect its infrastructures, and improve its ability to cope with cyber incidents. This will help increase the EU's open strategic autonomy in cybersecurity. Cluster 3 addresses cybercrime and the developing security threats in a digital age, such as criminal use of AI, to protect people, institutions and companies against cyber-enabled crimes. It will also continue to harness the opportunities of new technologies for law enforcement, border management and disaster risk reduction, and uphold the ability of the law enforcement to lawfully access and exploit digital evidence, without compromising or weakening privacy safeguards or cybersecurity (where relevant).
- *Supporting the green transition in civil security.* Climate change and environmental degradation are increasingly recognised as threat multipliers. Climate-related extreme

¹ The urgent need for which is emphasised throughout Sauli Niinistö's report "Safer Together: Strengthening Europe's Civilian and Military Preparedness and Readiness": https://commission.europa.eu/topics/defence/safer-together-path-towards-fully-prepared-union_en

events such as floods, droughts and forest fires pose increasing threats to people, nature, business and infrastructure. Geological hazards such as earthquakes, volcanic eruptions, and tsunamis are also threats affecting security. As EU Member States and Associated Countries face similar challenges, including varied and evolving transnational disasters, Cluster 3 will develop solutions to be applied throughout the EU to keep up to date with the developments. Cluster 3 will also address environmental crime. It will help understand how to manage borders in case of potential large-scale movements of people, including those caused by environmental stress. It will promote environmental sustainability of security solutions.

A second set of cross-cutting themes respond to challenges more specific to Cluster 3:

- *Ensuring legal and ethical outcomes that are supported by society.* Ethics, respect for the rule of law, fundamental rights, including human rights, privacy and the protection of personal data, as well as responsible research, must be at the heart of security research. Citizens and communities should be engaged, for example in assessing the societal impact of security technologies, to improve the quality of results and to build public trust. Social sciences and humanities (SSH) and social innovation need to be appropriately integrated into security research. The aim is to develop civilian security solutions that are as minimally intrusive as is possible while respecting freedoms, rights and values.
- *Protecting and empowering disadvantaged and vulnerable groups.* A range of groups are disproportionately exposed to violence and threats towards their security. These include, women, LGBTQI+, ethnic and racial minorities, persons with a migrant background, persons with disabilities, persons living with chronic illnesses, and elderly people and children. People depending on medicine are very vulnerable if supply chains are not secure, whether due to disasters or criminal activities. The needs and rights of travellers and migrants must be protected and promoted in border management activities. Vulnerable groups are at a higher risk of falling victim to trafficking in human beings. Research under Cluster 3 needs to consider how these groups can be better protected, including by analysing the structures that foster violence against these groups, developing measures to tackle such violence, and by promoting inclusive and empowering approaches that prioritise the needs and the rights of disadvantaged and vulnerable groups.
- *Improving market uptake of civil security research solutions.* Despite many success stories of tools and capabilities used by security practitioners originating from EU-funded security research projects, the uptake and deployment of successful research results remains a constant challenge. This challenge spans all destinations of Cluster 3. This Work Programme:
 - o continues the Cluster 3 practice of requiring projects to involve security practitioners alongside researchers and industry. Such involvement has shown its

added value in ensuring that tools, technologies and capabilities are developed for the benefit of and use by end-users and practitioners;

- o strengthens this involvement by introducing in many topics a requirement that proposals should plan a mid-term deliverable where practitioners involved in the project assess the project's mid-term outcomes;
- o innovation procurement is used under the SSRI destination this year with the open grounds preparatory work for future Pre-Commercial Procurement (PCP) topic, to bridge the gap between research, innovation and deployment, and thus strengthen the European market and European civil security industrial base;
- o encourages synergies with other EU funding programmes and instruments to enable or facilitate the uptake of the results of research into deployable solutions. Further information about this is given below;
- o the possibilities and support of security end-users like FRONTEX, EUROPOL, EU-LISA and the EU Drugs Agency, for testing and validation of security research results, should be used and expanded to the fullest extent;
- o supports projects which can directly or indirectly support public institutions intent on setting up their own innovation processes, which is to be encouraged;
- o encourages a competitive and innovative market, accessible for small and medium-sized enterprises (SMEs).

Where relevant, Cluster 3 will make use of space technology and Earth Observation.

International cooperation

Cluster 3 continues to require a specific approach to international cooperation to achieve the right balance between the benefits of exchange with key international partners, while ensuring the protection of the EU's security interests and the need for open strategic autonomy in critical sectors.

Under the destination 'Disaster-Resilient Society for Europe' (DRS), there is an established culture of comprehensive research collaboration with non-EU countries, taking account of the transnational aspect of different natural and human-made hazards and their causes (such as climate change). Therefore, under this destination, international cooperation is strongly encouraged, given the value of cooperating internationally, especially in developing technologies for first responders.

For the destinations relating to border management, the fight against crime and terrorism, infrastructure resilience and cybersecurity, international cooperation will be explicitly encouraged only where appropriate and specifically supportive of ongoing collaborative activities.

Synergies with other EU funding programmes and instruments

Cluster 3 will continue building and facilitating synergies with other EU funding programmes and instruments, in an approach with long-term capability development planning at its core. This is particularly important for civil security, where solutions are often demand-driven in a market that tends to be narrow, institutional, highly regulated, sensitive, and often fragmented along national lines.

From the demand side (funding for security practitioners and authorities, who are the users of security solutions), Cluster 3 will continue to operationalise the synergies with the home affairs funds: the Internal Security Fund (ISF) and the Integrated Border Management Fund (IBMF) in its two components, the Border Management and Visa Instrument (BMVI) and the Customs Control Equipment Instrument (CCEI). This will mean both facilitating the uptake of the results of Cluster 3 research by Member States and Associated Countries in their national programmes, and programming EU and specific actions with funding dedicated to taking up innovation resulting from Cluster 3 research.

In addition to the home affairs funds, Cluster 3 will continue promoting synergies with the Digital Europe Programme, the European Maritime Fisheries and Aquaculture Fund (EMFAF), the Union Civil Protection Mechanism (Knowledge for Action in Prevention and Preparedness calls for proposals, rescEU grants, early warning capabilities, and the training and exercises programme), the European Regional Development Fund (ERDF), the Cohesion Fund, the Neighbourhood, Development and International Cooperation Instrument – Global Europe instrument for the Southern and Eastern Neighbourhood and the Instrument for Pre-Accession, the Technical Support Instrument (TSI), the OLAF Union Anti-Fraud Programme (UAFP) and EU4Health.

From the supply side (funding for European innovators who develop and commercialise security solutions), the promotion of the uptake of the results of Cluster 3 research could involve the Innovation Fund and, to a lesser extent, EU actions under the ISF and the BMVI, as well as Health Emergency Preparedness and Response (HERA Invest) and the European Institute of Innovation and Technology (EIT).

Practical ways in which Cluster 3 will continue to improve and promote synergies include raising Member States' and Associated Countries authorities' and innovators' awareness of the opportunities for funding for uptake in other EU programmes and instruments, tracking and studying uptake of Cluster 3 projects' results in other EU programmes and instruments, and planning actions in other EU funding programmes and instruments to fund innovation in civil security that takes up the results of Cluster 3 research.

Research funded under Cluster 3 will continue to focus exclusively on civilian applications. Coordination with the European Defence Fund (EDF) and the EU Space Programme will be sought to strengthen cross-cluster complementarities also with actions foreseen in Cluster 4².

² To this end, the Commission and Member States have in place a mechanism for strategic planning and coordination of R&D related to the Copernicus Security Services (CSS), which maps current operational services and on-going and planned R&D initiatives, as well as it identifies end-user operational requirements and promotes sharing of information between projects with common interests.

Implementation

Proposals under certain topics in this Work Programme should plan their activities opting for the Financial Support to Third Parties (FSTP).

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The mechanism drives R&D objectives listed in a Strategic Research Agenda (SRA) updated on a yearly basis. Engagement in the CSS-SRA information sharing process is therefore sought, for those projects planning to use Earth Observation and associated services for civil security applications.

Calls

Call - Civil Security for Society

HORIZON-CL3-2025-01

Overview of this call³

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁴	Indicative number of projects expected to be funded
		2025		
Opening: 12 Jun 2025 Deadline(s): 12 Nov 2025				
Destination - Better protect the EU and its citizens against Crime and Terrorism				
HORIZON-CL3-2025-01-FCT-01: Open topic on modern information and forensic evidence analysis and on frontline policing	RIA	18.00	Around 3.00	6
HORIZON-CL3-2025-01-FCT-02: Open topic on prevention, detection and deterrence of various forms of crime and terrorism through an enhanced understanding of the related societal issues	RIA	12.00	Around 3.00	4
HORIZON-CL3-2025-01-FCT-03: Open topic on improved intelligence picture and enhanced prevention, detection and deterrence of various forms of organised crime	IA	7.50	Around 3.75	2
HORIZON-CL3-2025-01-FCT-04:	IA	6.00	Around	1

³ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁴ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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Humanitarian demining / Unexploded Ordnance Disposal (UXO) of civil areas and unexploded ordnance risk education			6.00	
Destination - Effective management of EU external borders				
HORIZON-CL3-2025-01-BM-01: Open topic on efficient border surveillance and maritime security	IA	10.00	Around 3.333333	3
HORIZON-CL3-2025-01-BM-02: Open topic on secured and facilitated crossing of external borders	RIA	9.00	Around 3.00	3
HORIZON-CL3-2025-01-BM-03: Open topic on better customs and supply chain security	IA	9.00	Around 3.00	3
Destination - Resilient Infrastructure				
HORIZON-CL3-2025-01-INFRA-01: Open topic for improved preparedness for, response to and recovery from large-scale disruptions of critical infrastructures	IA	15.00	Around 5.00	3
HORIZON-CL3-2025-01-INFRA-02: Open topic for role of the human factor for the resilience of critical infrastructures	RIA	7.00	Around 3.50	2
Destination - Disaster-Resilient Society for Europe				
HORIZON-CL3-2025-01-DRS-01: Open topic on citizen and regional and/or local authorities' engagement in enhanced disaster risk awareness, including education, and preparedness	RIA	12.00	Around 4.00	3
HORIZON-CL3-2025-01-DRS-02: Open topic on Improving disaster risk management and governance to ensure self-sufficiency and sustainability of operations in support of enhanced resilience	RIA	10.50	Around 3.50	3
HORIZON-CL3-2025-01-DRS-03: Open topic on testing / validating tools, technologies and data used in cross-border prevention, preparedness and responses to climate extreme and geological events and chemical, biological	IA	13.50	Around 4.50	3

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or radiological emergency threats				
HORIZON-CL3-2025-01-DRS-04: Advancing autonomous systems and robotics for high-risk disaster response, strengthening disaster resilience in conflict-afflicted crisis zones	IA	5.00	Around 5.00	1
Destination - Strengthened Security Research and Innovation				
HORIZON-CL3-2025-01-SSRI-01: National Contact Points (NCPs) in the field of security and cybersecurity fostering the links with National Community building for Safe, Secure and Resilient Societies	CSA	3.00	Around 3.00	1
HORIZON-CL3-2025-01-SSRI-02: Uptake Acceleration Services	CSA	5.00	Around 5.00	1
HORIZON-CL3-2025-01-SSRI-03: Open grounds for pre-commercial procurement of innovative security technologies	CSA	2.00	Around 1.00	2
HORIZON-CL3-2025-01-SSRI-04: Accelerating uptake through open proposals for advanced SME innovation	IA	3.00	Around 1.50	2
HORIZON-CL3-2025-01-SSRI-05: Data repository for security research and innovation	IA	3.00	Around 3.00	1
HORIZON-CL3-2025-01-SSRI-06: Demand-led innovation for civil security through Pre-Commercial Procurement (PCP)	PCP	5.50	Around 5.50	1
Overall indicative budget		156.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex

	D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

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Destinations

Destination - Better protect the EU and its citizens against Crime and Terrorism

As underlined in the Horizon Europe strategic plan 2025-2027, proposals for topics under this Destination should “*continue developing European practitioners’ capabilities to effectively prevent, detect and investigate terrorism, organised crime [...], cybercrime, the most harmful crimes [...] and criminal aspects of behaviour on the internet [...]. Investment provides further support for modern information analysis, modern forensics tools [...], lawful evidence collection, and the recognition of societal problems arising from various forms of crime. This destination will also prepare policymakers, practitioners, companies and the general public for tackling emerging and evolving threats, by identifying them early on, flagging them and making preliminary recommendations on how to deal with them. Areas of new or increased focus will include the identification and investigation of criminal networks including emerging phenomena [...]. The destination will continue to pay close attention to financial crimes, as a common denominator for most criminal activities.*”

This destination will support the implementation of the European Commission political guidelines 2024-2029 for a ‘Safer and more secure Europe’, a ‘Preparedness Union’, with ‘Stronger Common Borders’, protecting democracy and putting research and innovation at the heart of a resilient economy. Overall, research under this Cluster should continue to focus on preserving and securing citizens’ basic right to feel safe. This destination will support the European Commission efforts towards:

- a new Counter-Terrorism Agenda to address new and emerging threats, and,
- the gradual establishment and further development of the planned European Critical Communication System for public authorities in charge of security and safety.

To this end, proposals should contribute to the achievement of one or more of the following impacts:

- Modern information analysis for Police Authorities, allowing them to efficiently fight criminals and terrorists who use novel technologies;
- Improved forensics and lawful evidence collection, increasing the capabilities to apprehend criminals and terrorists and bring them to the court;
- Enhanced prevention, detection and deterrence of societal issues related to various forms of crime, including cybercrime, and terrorism, such as violent radicalisation, domestic and sexual violence, including child sexual abuse, or juvenile offenders;
- Increased security of citizens against terrorism, including in public spaces (while preserving their quality and openness);

- Improved intelligence picture and enhanced prevention, detection and deterrence of various forms of organised crime;
- More secure cyberspace for citizens, especially children and elderly people, through a robust prevention, detection, and protection from cybercriminal activities.

More specifically, in the rapidly evolving technological and societal landscape, with climate change and environmental aspects increasingly seen as security issues, and with growing threats to vulnerable citizens, various forthcoming challenges that European society faces deserve dedicated research and innovation actions in the scope of this Destination. Some of them are:

- Challenges related to modern information and forensic evidence analysis as well as to frontline policing, such as
 - o criminal use of various forms of cutting-edge technologies,
 - o development of novel methods of forensics analysis based on new and emerging technologies, e.g., forensic on-site analysis with mobile real-time cloud sharing applications,
 - o lawful access to and integrity of data and evidence, or
 - o modern physical threats to frontline police and corresponding needs for a next generation smart police protective gear;
- Challenges regarding prevention, detection and deterrence of various forms of crime and terrorism through an enhanced understanding of the related societal issues, in the context of:
 - o crime, such as
 - vulnerability of children and youth, both offline and online,
 - increased availability and use of stimulants and synthetic drugs, or
 - forest fires of criminal origin, and other environmental crimes;
 - o terrorism and radicalisation, such as
 - blurring of lines between different types of terrorism, including right-wing, left-wing, anarchist, jihadist, and other ideologies, or
 - expansion of lone actors' attacks in the background of social isolation, polarisation and recurrent economic crises;
 - multiplication of non-violent forms of radicalisation, such as malign foreign influences and funding aimed at challenging and undermining EU values.

- Challenges related to improving the intelligence picture and enhancing the prevention, detection and deterrence of various forms of organised crime, such as
 - o organised criminal groups profiting from migrant smuggling and trafficking in human beings;
 - o drug-related violence and the association between involvement in the drug market with other forms of criminality and violent crime, or
 - o money laundering.

Research and innovation funded under this Destination will contribute to policy objectives such as those of the:

- Police cooperation package⁵ (information exchange⁶, automated data exchange for police cooperation - “Prüm II”⁷, operational cross-border police cooperation⁸);
- Counter-Terrorism Agenda for the EU⁹ (incl. Regulation 2021/784/EU on addressing dissemination of terrorist content online & Directive 2017/541/EU on combating terrorism);
- EU C-UAS Strategy¹⁰ (counter-drone policy);
- EU Strategy to Tackle Organised crime¹¹;
- EU Strategy on combatting Trafficking in Human Beings¹² (the modified Directive on preventing and combating trafficking in human being and protecting its victims), and the Proposal to strengthen EU legislation to prevent and fight migrant smuggling¹³ (notably its aspect of reinforcing Europol’s role in the fight against migrant smuggling and trafficking in human beings);
- EU drugs measures (Strategy¹⁴, Action Plan¹⁵ and Roadmap to fight Drugs Trafficking and Organised Crime¹⁶);
- EU environmental crime measures¹⁷ (review of the Directive 2008/99/EC on protection of the environment through criminal law);

⁵ COM/2021/782 final, COM/2021/784 final, ST/8720/2022/INIT.

⁶ Directive (EU) 2023/977.

⁷ Regulation (EU) 2024/982.

⁸ Council Recommendation (EU) 2022/915.

⁹ COM/2020/795 final.

¹⁰ COM/2023/659 final.COM/2023/659 final.

¹¹ COM/2021/170 final.

¹² COM/2021/171 final; Directive (EU) 2024/1712; COM/2023/755 final.

¹³ COM/2023/754 final.

¹⁴ 14178/20.

¹⁵ ST/9819/2021/INIT.

¹⁶ COM/2023/641 final.

¹⁷ Directive (EU) 2024/1203.

- EU anti-corruption measures (Communication¹⁸, proposal for a Directive¹⁹);
- Directive (EU) 2019/713 on non-cash means of payment;
- EU strategy on a more effective fight against child sexual abuse²⁰ (incl. Proposal for a regulation to prevent and combat child sexual abuse²¹); and
- EU Regulation (2022/2371) on serious cross-border threats to health.

This Destination will also support, whenever appropriate and applicable, proposals with:

- a clear strategy on how they will adapt to the fast-evolving environment in the area of fight against crime and terrorism (evolution of related technologies, evolution of criminal modi operandi and business models related to these technologies, etc.);
- the involvement of Police Authorities in their core;
- the active role for Non-Governmental Organisations (NGOs) and Civil Society Organisations (CSOs);
- the active involvement of Small and Medium Enterprises (SMEs);
- a minimum-needed platform, i.e., tools that are modular and can be easily plugged into another platform (in order to avoid platform multiplication);
- tools that are developed and validated against practitioners' needs and requirements;
- tools following existing or new standards for data exchange, including cybersecurity best-practices;
- a robust plan on how they will build on the relevant predecessor projects;
- education and training aspects, especially for Police Authorities and other relevant practitioners, as well as information sharing and awareness raising of the citizens;
- a clear strategy on the uptake and sustainability of the project results, with special attention to the access at little or no cost to created tools and methodologies by Police Authorities involved in the project;
- a well-developed plan both on how research data for training and testing will be obtained, in order to reach the requested Technology Readiness Levels (TRLs), and on how the specific TRL will be measured.

¹⁸ JOIN(2023) 12 final.

¹⁹ COM/2023/234 final.

²⁰ COM/2020/607 final.

²¹ COM/2022/209 final.

Where possible and relevant, synergy-building and clustering initiatives with successful proposals in the same area should be considered, in coordination with the Community for European Research and Innovation for Security (CERIS)²².

Proposals are invited against the following topic(s):

HORIZON-CL3-2025-01-FCT-01: Open topic on modern information and forensic evidence analysis and on frontline policing

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <p>This topic requires the active involvement, as beneficiaries, of at least 2 Police Authorities²³ from at least 2 different EU Member States or Associated Countries. For these participants, applicants must fill in the table “Information about security practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B.

²² https://home-affairs.ec.europa.eu/networks/ceris-community-european-research-and-innovation-security_en

²³ In the context of this Destination, ‘Police Authorities’ means public authorities explicitly designated by national law, or other entities legally mandated by the competent national authority, for the prevention, detection and/or investigation of terrorist offences or other criminal offences, specifically excluding police academies, forensic institutes, training facilities as well as border and customs authorities.

<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio, grants will be awarded to applications not only in order of ranking but at least also to one project that is the highest ranked within each of the three options (Option a), Option b) and Option c)), provided that the applications attain all thresholds.</p>
<i>Security Sensitive Topics</i>	<p>Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.</p>

Expected Outcome: Project results are expected to contribute to some or all of the following expected outcomes:

- Modern, uniform and validated tools, skills, methodologies and innovative training curricula for security practitioners (Police Authorities and forensic institutes in Europe) to prevent, detect and investigate criminal and terrorist offences, including the lawful court-proof collection of crime evidence;
- Improved mechanisms for cross-border information exchange in the fight against crime and terrorism, taking into account all applicable legislation and fundamental rights;
- Evidence-based support to policy-makers on shaping and tuning of regulation related to modern information analysis, forensic evidence analysis or frontline policing.

Scope: Under the open topic, proposals are welcome to address new, upcoming or unforeseen challenges and/or creative or disruptive solutions for improving modern information and forensic evidence analysis or frontline policing, that are not covered by topics of Horizon Europe Calls Fighting Crime and Terrorism 2023-2024. If they relate to some of the topics covered by Horizon Europe Calls Fighting Crime and Terrorism 2021-2022, the proposals should explain how they will build on and not duplicate them.

Proposals are expected to address one of the following options:

Option a: tackling advanced technology challenges;

Option b: modern forensics analysis using new and emerging technologies;

Option c: modernisation of frontline policing.

Adapted to the nature, scope and type of proposed projects, proposals should also convincingly explain how they will plan and/or carry out demonstration, testing or validation of developed tools and solutions. Furthermore, proposals should outline the plans to develop possible future uptake and upscaling at national and EU level for possible next steps once the project is finalised. Proposals should also consider, build on if appropriate and not duplicate

previous research, including but not limited to research by other Framework Programmes' projects.

Coordination among the successful proposals from this topic should be envisaged to avoid duplication and to exploit complementarities as well as opportunities for increased impact. For Option b), the active involvement, as beneficiaries, of forensic institutes from EU Member States or Associated Countries is recommended.

The proposals funded under this topic that concern issues which are within the mandate of Europol²⁴ are expected to engage with the Europol Innovation Lab during the lifetime of the project, including validating the outcomes, with the aim of facilitating future uptake of innovations for the law enforcement community. Similarly, if the proposals concern drug-related issues, they are expected to engage with the EU Drugs Agency during the lifetime of the project, including validating the outcomes.

In order to ensure project impact and the active involvement of and timely feedback from relevant security practitioners, i.e., Police Authorities and/or forensic institutes, proposals should plan a mid-term deliverable consisting in the assessment of the project's mid-term outcomes, performed by the practitioners involved in the project.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL3-2025-01-FCT-02: Open topic on prevention, detection and deterrence of various forms of crime and terrorism through an enhanced understanding of the related societal issues

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply:

²⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32016R0794> (Annex I)

	<p>The following additional eligibility criteria apply:</p> <p>This topic requires the active involvement, as beneficiaries, of at least 1 Police Authority²⁵ and at least 1 Civil Society Organisation, CSO (or Non-Governmental Organisation, NGO) from at least 2 different EU Member States or Associated Countries. For these participants, applicants must fill in the table “Information about security practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio, grants will be awarded to applications not only in order of ranking but at least also to one project that is the highest ranked within each of the two options (Option a and Option b), provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries must provide financial support to third parties in the form of grants. The maximum amount to be granted to each third party is EUR 60 000 to support effective collaboration and/or coordination with additional relevant national Police Authorities and/or CSOs/NGOs from EU Member States or Associated Countries.</p>
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: Project results are expected to contribute to some or all of the following expected outcomes:

²⁵ In the context of this Destination, ‘Police Authorities’ means public authorities explicitly designated by national law, or other entities legally mandated by the competent national authority, for the prevention, detection and/or investigation of terrorist offences or other criminal offences, specifically excluding police academies, forensic institutes, training facilities as well as border and customs authorities.

- Improved, modern, uniform and validated tools, skills or methodologies as well as innovative training curricula for security practitioners (Police Authorities, Non-Governmental Organisations, Civil Society Organisations) in Europe, to prevent, detect and deter criminal or terrorist offences, taking into account all applicable legislation and fundamental rights;
- Enhanced understanding of the cultural and societal aspects of crime or terrorism/radicalisation, as well as on the key challenges related to combating them;
- Evidence-based support to policymakers on shaping and tuning of regulation related to crime or terrorism/radicalisation;
- Enhanced perception by citizens that Europe is an area of freedom, security and justice, fully respecting privacy and human rights, thanks to, e.g., innovative awareness-raising campaigns explaining to citizens the key and evolving mechanisms of crime or terrorism/radicalisation, and how to protect against them.

Scope: Under the open topic, proposals are welcome to address new, upcoming or unforeseen challenges and/or creative or disruptive solutions for improving the prevention, detection and deterrence of various forms of crime or terrorism/radicalisation through an enhanced understanding of the related societal issues. These challenges and/or solutions should not be covered by topics of Horizon Europe Calls Fighting Crime and Terrorism 2023-2024. If they relate to some of the topics covered by Horizon Europe Calls Fighting Crime and Terrorism 2021-2022, the proposals should convincingly explain how they will build on and not duplicate them. The same applies regarding Horizon Europe projects under the calls HORIZON-CL2-2022-DEMOCRACY-01-05: Evolution of political extremism, and HORIZON-CL2-2024-DEMOCRACY-01-05: Gender-roles in extremist movements.

Proposals are expected to address one of the following options:

Option a: societal issues related to crime;

Option b: societal issues related to terrorism and radicalisation.

Adapted to the nature, scope and type of proposed projects, proposals should also convincingly explain how they will plan and/or carry out demonstration, testing or validation of developed tools and solutions. Furthermore, proposals should outline the plans to develop possible future uptake and upscaling at national and EU level for possible next steps once the project is finalised. Proposals should also consider, build on if appropriate and not duplicate previous research, including but not limited to research by other Framework Programmes' projects.

Coordination among the successful proposals from this topic should be envisaged to avoid duplication and to exploit complementarities as well as opportunities for increased impact.

The proposals funded under this topic that concern issues which are within the mandate of Europol²⁶ are expected to engage with the Europol Innovation Lab during the lifetime of the project, including validating the outcomes, with the aim of facilitating future uptake of innovations for the law enforcement community. Similarly, if the proposals concern drug-related issues, they are expected to engage with the EU Drugs Agency during the lifetime of the project, including validating the outcomes.

If the funded proposal concerns radicalisation, the consortium is encouraged to liaise with the EU Knowledge Hub on prevention of radicalisation with the aim of facilitating the streamlining of their priorities and the dissemination of their results.

To ensure the active involvement of and timely feedback from relevant security practitioners, i.e., Police Authorities and Non-Governmental Organisations / Civil Society Organisations, proposals should plan a mid-term deliverable consisting in the assessment of the project's mid-term outcomes, performed by the practitioners involved in the project.

Activities proposed within this topic should address both technological and societal dimensions of the tackled challenge in a balanced way. This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related innovation activities.

Proposals should plan their activities opting for the Financial Support to Third Parties in order to provide financial support to practitioners (Police Authorities and/or Non-Governmental Organisations/Civil Society Organisations) for expanding the proposed work in terms of additional user groups, complementary assessments, technology- or methodology-testing activities. From 5% up to 20% of the EU funding requested by the proposal may be allocated to the purpose of financial support to third parties.

Proposals must clearly describe the objectives and the expected results to be obtained, including the elements listed in the application template. Proposals are also expected to describe the methods and processes relevant to comply with the general eligibility conditions for financial support to third parties set out in General Annex B and to demonstrate effectiveness (impact).

HORIZON-CL3-2025-01-FCT-03: Open topic on improved intelligence picture and enhanced prevention, detection and deterrence of various forms of organised crime

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.75 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal

²⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32016R0794> (Annex I)

	requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.50 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>The following additional eligibility criteria apply:</p> <p>This topic requires the active involvement, as beneficiaries, of at least 3 Police Authorities²⁷ from at least 3 different EU Member States or Associated Countries. For these participants, applicants must fill in the table “Information about security practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Improved, modern, uniform and validated tools, skills, methodologies and innovative training curricula for Police Authorities in Europe, to prevent, detect and investigate organised crime offences, including the early detection of criminal networks and the identification of emerging trends and challenges;

²⁷ In the context of this Destination, ‘Police Authorities’ means public authorities explicitly designated by national law, or other entities legally mandated by the competent national authority, for the prevention, detection and/or investigation of terrorist offences or other criminal offences, specifically excluding police academies, forensic institutes, training facilities as well as border and customs authorities.

- Improved mechanisms for the use of cross-border tools to facilitate secure information exchange in the fight against organised crime, including criminal networks, taking into account all applicable legislation and fundamental rights;
- Enhanced understanding of the key challenges and best practices related to combating cross-border organised crime;
- Evidence-based support to policy-makers on shaping and tuning of regulation related to cross-border organised crime including criminal networks.

Scope: Under the open topic, proposals are welcome to address new, upcoming or unforeseen challenges and/or creative or disruptive solutions for improving the intelligence picture and enhancing the prevention, detection and deterrence of various forms of organised crime, that are not covered by topics of Horizon Europe Calls Fighting Crime and Terrorism 2023-2024. If they related to some of the topics covered by Horizon Europe Calls Fighting Crime and Terrorism 2021-2022, the proposals should convincingly explain how they will build on and not duplicate them. Adapted to the nature, scope and type of proposed projects, proposals should also convincingly explain how they will plan and/or carry out demonstration, testing or validation of developed tools and solutions. Furthermore, proposals should outline the plans to develop possible future uptake and upscaling at national and EU level for possible next steps once the project is finalised. Proposals should also consider, build on if appropriate and not duplicate previous research, including but not limited to research by other Framework Programmes' projects.

Coordination among the successful proposals from this topic should be envisaged to avoid duplication and to exploit complementarities as well as opportunities for increased impact. If relevant, the active involvement, as beneficiaries, of Border Guard and/or Customs Authorities from EU Member States or Associated Countries is recommended.

The proposals funded under this topic that concern issues which are within the mandate of Europol²⁸ are expected to engage with the Europol Innovation Lab during the lifetime of the project, including validating the outcomes, with the aim of facilitating future uptake of innovations for the law enforcement community. Similarly, if the proposals concern drug-related issues, they are expected to engage with the EU Drugs Agency during the lifetime of the project, including validating the outcomes.

To ensure the active involvement of and timely feedback from relevant security practitioners, i.e., Police Authorities and Border Guards / Customs Authorities, proposals should plan a mid-term deliverable consisting in the assessment, performed by the practitioners involved in the project, of the project's mid-term outcomes.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

²⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32016R0794> (Annex I)

HORIZON-CL3-2025-01-FCT-04: Humanitarian demining / Unexploded Ordnance Disposal (UXO) of civil areas and unexploded ordnance risk education

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <p>This topic requires the active involvement, as beneficiaries, of at least one international humanitarian demining organisation and two local or regional Non-Governmental Organisations active in humanitarian demining from at least three different EU Member States or Associated Countries, including Ukraine. For these participants, applicants must fill in the table “Information about security practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>The participation of at least one entity from Ukraine in the consortium is mandatory with competences in humanitarian demining / Unexploded Ordnance Disposal (UXO).</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Improved, modern and validated tools, skills, methodologies and innovative training curricula for practitioners involved in humanitarian demining and Unexploded Ordnance Disposal (UXO) of civil areas, taking into account all applicable legislation and fundamental rights;
- Improved education activities aimed at reducing risks of injuries from anti-personnel mines and other unexploded ordnance;
- Enhanced understanding of the key challenges and best practices related to humanitarian demining and to unexploded ordnance risk education taking into account the experience of Ukrainian participants;
- Evidence-based support to policy-makers on shaping of the EU mine action.

Scope: In post-conflict areas, lives of civilians are in danger and the return of economic activity is hindered because the land is contaminated by anti-personnel mines and other unexploded ordnance. The EU provides a continuous support to humanitarian demining activities in heavily mine-affected countries and regions all over the world, thus promoting peace, security, post-conflict reconstruction, as well as social and economic rehabilitation. In Ukraine, mine action is a critical aspect of the humanitarian emergency response, the goal of which is to support the return of the civilian population and the rebuilding of crucial civilian infrastructure. As part of their mine action operations, EU Member States and Horizon Europe Associated Countries, such as Croatia, Cyprus, Bosnia and Herzegovina, and Armenia also strive to make their land completely free of anti-personnel mines and other explosive ordnance.

Humanitarian demining is not to be confused with military demining, which is the process undertaken by soldiers to clear a safe path so they can advance during conflict.

Various humanitarian demining initiatives have been developed, which often incur high costs and are typically slow because no mistakes are allowed. In addition, due to a large diversity of contaminated areas, types of anti-personnel mines and of their deployment methods, as well as a more complex contamination that includes unexploded ordnance and improvised explosive devices, there is no single solution to the problem. Finally, new anti-personnel mines are being developed and new mine deployment techniques being used. Therefore, new, improved, innovative or disruptive solutions, accompanied by related training curricula, are needed to enhance humanitarian demining activities in civil areas. Since the aim of humanitarian demining is to restore peace and security, it has to be complemented by an adequate risk education, raising awareness of civilians of the risks from anti-personnel mines and other unexploded ordnance, which will help them act in such a way that will reduce the risk to people and the environment. A range of risk education initiatives exist, but they usually lack, among others, collaboration with related Non-Governmental Organisations (NGOs), sustainability, and a comprehensive needs assessment aiming to improve their effectiveness.

Within this topic, improved, modern and validated tools, skills, methodologies and innovative training curricula for practitioners are expected, which are adapted to regional and cross-border contexts.

Proposals should also explain how they will plan and/or carry out demonstration, testing or validation of developed tools and solutions. Furthermore, proposals should outline the plans to develop possible future uptake and upscaling at national and EU and international level for possible next steps once the project is finalised. Proposals should also consider, build on if appropriate and not duplicate previous research, including but not limited to research by other Framework Programmes' projects²⁹. Proposals are also expected to connect and create synergies and explore complementarities with other related initiatives in humanitarian demining and in explosive ordnance risk education.

Activities proposed within this topic should address both technological (humanitarian demining) and societal (explosive ordnance risk education) dimensions in a balanced way.

To ensure the active involvement of and timely feedback from relevant security practitioners, proposals should plan a mid-term deliverable consisting in the assessment, performed by the practitioners involved in the project, of the project's mid-term outcomes.

Within this topic, the European Commission encourages all potential participants to create, where possible, opportunities for the affected persons and entities, in particular Ukrainian national mine action authorities, researchers and innovators, demining agencies or companies as well as NGOs.

²⁹ Such the TIRAMISU and DBOX projects funded under FP7; projects MUNIMAP, BASTA, ExPloTect; project(s) funded under HORIZON-CL3-2023-BM-01-02 – “Identify, inspect, neutralise Unexploded Ordnance (UXO) at sea”; project(s) funded under EMFAF-2023-PIA-FLAGSHIP-MUNITION – “Regional flagship projects supporting a sustainable blue economy in EU sea basins – submerged munitions in the Baltic Sea”; project(s) funded under PPPA-2024-MUNITIONS – “Saving our Seas – Reducing the danger of munitions dumped in European seas”.

Destination - Effective management of EU external borders

Proposals for topics under this Destination should contribute to the following expected impact: “facilitating legitimate movement of passengers and goods into the EU, while preventing illicit acts” of the Horizon Europe strategic plan 2025-2027.

This destination will support the implementation of the European Commission political guidelines 2024-2029 for a ‘Safer and more secure Europe’, a ‘Preparedness Union’, with ‘Stronger Common Borders’, protecting democracy and putting research and innovation at the heart of a resilient economy. Overall, research under this Cluster should continue to focus on preserving and securing citizens’ basic right to feel safe. This destination will support the European Commission efforts towards:

- a wider EU Port Strategy focusing on security and a new European action plan against drug trafficking.
- boosting security research for stronger common borders / more secure and more fluid borders.

Projects funded under the topics of Work Programme 2025 will promote technological and social research and innovation and further explore and develop future capabilities for European practitioners in the areas of border management, customs and supply chain security, and civilian maritime and aviation security. Capability areas to address may include:

- monitoring, preparedness and reaction in border management tasks, managing irregular or illegal activities involving people or goods across external borders of the EU;
- safeguarding human rights, and ensuring legal compliance, in efficient border management;
- integrated and continuous border surveillance, situational awareness (including but not limiting to maritime situational awareness) and analysis support;
- safety, user experience and performance of practitioners’ staff in border management;
- security, privacy and usability of identity and (travel) documents;
- facilitating travel of bona fide passengers across external borders of the EU;
- data analysis on documents, biometrics, or cargo compliant with GDPR³⁰ and EU Artificial Intelligence Act³¹ and compatible with sandboxes approaches;
- detection of dangerous, illicit and illegal goods and materials trafficked through external borders of the EU and the supply chain;
- prevention and disruption of such trafficking.

³⁰ Regulation (EU) 2016/679.

³¹ Regulation (EU) 2024/1689.

Research and innovation funded under this Destination will contribute to policy objectives such as:

- the border management and security dimensions of the Pact on Migration and Asylum³²;
- the Multiannual Strategic Policy for European Integrated Border Management³³;
- the Capability Roadmap of the European Border and Coast Guard³⁴;
- the proposals to strengthen EU legislation to prevent and fight against migrant smuggling³⁵;
- the proposals on digitalisation of travel documents and facilitation of travel³⁶;
- the civil security aspects of the updated EU Maritime Security Strategy³⁷;
- the proposals for EU Customs reform³⁸.

Research and innovation will contribute to sustain and improve capabilities to cope with potential future critical situations or emerging challenges regarding both the flow of people and the flow of goods across external EU borders. Examples may include:

- threats of illicit flows of dangerous materials and weapons because of conflicts outside the Union;
- the potential for large-scale movements of people including those resulting from the instrumentalisation of irregular migration, from conflicts, or from social, economic, environmental and climate stress in the EU neighbourhood;
- the exploitation and smuggling of migrants across the EU's external borders, in particular of vulnerable groups including women and girls.

Furthermore, challenges can be exacerbated by the rapid adoption of new technologies by criminal organisations, and how new technologies help the sophistication of organised crime methods.

Among technological approaches, for example, artificial intelligence (AI) offers many opportunities to improve border management services, including analytical support. At the same time AI also brings challenges such as morphing; potential misuse of data; doubts of bias or unexplained decision supports. Research and innovation are also necessary to minimise risks from these challenges, also in light of the full entry into force of the EU

³² COM (2020) 610 final.

³³ COM (2023) 146 final.

³⁴ FRONTEX MB Decision 16/2024.

³⁵ COM/2023/754 final; COM/2023/755 final.

³⁶ COM (2021) 277 final; COM (2024) 670 final.

³⁷ JOIN/2023/8 final.

³⁸ COM (2023) 257 final; COM (2023) 258 final – 2023/0156(COD); COM (2023) 259 final – 2023/0157(NLE); COM (2023) 262 final – 2023/0158(CNS).

Artificial Intelligence Act. Monitoring large maritime areas from space is possible today through the Copernicus Maritime and Border Surveillance services, for a first screening of potential risks. But ‘new space’ solutions are also coming to the market and need validation in real-life operational scenarios, an area where R&D can be of help.

Furthermore, research and innovation under this Destination will contribute to:

- lower the environmental impact and footprint of border, customs and supply chain security tasks, through innovative solutions and methods;
- integrate and improve safety and cybersecurity of EU information systems, of innovative equipment, and of information and data from different sources in these areas, especially during their exchange at operational or tactical levels;
- safeguard the open strategic autonomy and technological sovereignty of the EU in critical security areas by contributing to a more competitive and resilient EU security technology and industrial base;
- facilitate spin-in of technology from other clusters contributing to the objectives of the call.

Research projects funded under this Destination should engage with all stakeholders involved, including travellers, migrants, and operators and service providers, as relevant. Research will integrate approaches to safeguarding and promoting EU values and fundamental rights in these areas, with a special focus on human rights.

Projects should align and contribute primarily to the realisation of the Capability Roadmap of the European Border and Coast Guard (EBCG) published by the EBCG Agency (Frontex), especially the Roadmap’s mid- and long-term perspectives. The Roadmap provides strategic vision for investments into the development of capabilities and is the result of integrated planning between the Member States and the European Border and Coast Guard Agency. Proposals submitted under this Destination should explain the alignment primarily with the Capability Roadmap and the plans for further uptake of the research outcomes, especially by involved practitioners in line with their national Capability Development Plans.

Frontex will be closely associated with and will assist Member States and the European Commission in drawing up and implementing relevant research and innovation activities. The European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (eu-LISA) may also assist the European Commission on relevant research and innovation activities and specific topics. Hence proposals should consider and foresee that Frontex and/or eu-LISA may for example observe projects’ pilots and demonstrations, with the aim of facilitating future uptake of innovations for the border and coast guard community. Furthermore, funded projects will likely have the opportunity of exploiting the core capabilities of the “Frontex Technology and Innovation Centre”, Frontex’s future collaborative space for testing, demonstration, simulation and assessment of solutions,

processes and procedures. At the stage of proposal preparation, Frontex and/or eu-LISA will not provide any guidance on, or otherwise be involved in the preparation of, project proposals.

To accomplish the objectives of this Destination, additional eligibility conditions have been defined regarding the active involvement of relevant security practitioners or end-users in the research projects' consortia.

Proposals submitted under this Destination should demonstrate how they plan to build on relevant predecessor projects; to consider the citizens' and societal perspectives; to include education, training and awareness raising for practitioners and citizens; to measure the achieved TRL.

Regarding synergies and complementarities, this Destination will develop knowledge and technologies that may be taken up by other instruments, such as the Integrated Border Management Fund, in its components of the Border Management and Visa Instrument (BMVI) and Customs Control Equipment Instrument (CCEI). Member States authorities participating in research projects can plan to use those instruments for uptake (piloting, testing, validation, scale-up, transfer, acquire, deploy, etc) of innovative solutions developed from research, as early as TRL 7.

Cluster 3 will further incentivise the use of European Space Programmes' services for border management innovation where relevant and their services and capabilities, including demonstration and validation of new technologies in operational environments.

Successful proposals under this Destination are invited to cooperate with other EU-led or EU-funded initiatives in the relevant domains, such as the Knowledge Networks for Security Research & Innovation funded under Horizon Europe Cluster 3, or other security research and innovation working groups set-up by the Commission or EU Agencies.

Funded projects are encouraged to liaise with the European Commission's Joint Research Centre (JRC), for example with regards to a possibility of testing the relevant research outputs at the JRC Border Security Lab, and to apply developments for security applications from space, through the *Strategic Research Agenda* for the Copernicus Security Services.

Where possible and relevant, synergy-building and clustering initiatives with projects in the same area should be considered, in coordination with the Community for European Research and Innovation (CERIS)³⁹.

Proposals are invited against the following topic(s):

HORIZON-CL3-2025-01-BM-01: Open topic on efficient border surveillance and maritime security

Call: Civil Security for Society

³⁹ https://home-affairs.ec.europa.eu/networks/ceris-community-european-research-and-innovation-security_en

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.333333 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>The following additional eligibility criteria apply:</p> <p>This topic requires the active involvement, as beneficiaries, of at least 2 Border or Coast Guard Authorities from at least 2 different EU Member States or Associated Countries. For these participants, applicants must fill in the table “Information about security practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁴⁰.</p>
<i>Security Sensitive</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and

⁴⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

<i>Topics</i>	SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.
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Expected Outcome: Project results are expected to contribute to all of the following expected outcome(s):

- Improved security of EU external borders, or of maritime environment, infrastructures and activities, against natural, accidental or incidental disasters; challenges such as illegal trafficking (covering air, maritime, underwater, land/surface), irregular migration or exceptional situations of mass arrivals at external borders, illegal exploitation of natural resources, piracy and potential terrorist attacks, cyber and hybrid threats;
- Sustained and improved surveillance, real-time situational awareness, and reaction capabilities to cope with potential critical situations at the EU external borders;
- Improved decision-making processes and capabilities for assessing, confirming and responding to distress situations at sea and land, allowing a better and faster response.

Scope: Under this topic, proposals are welcome to address new, upcoming or unforeseen challenges and/or creative or disruptive solutions for improving capabilities of practitioners in border surveillance and/or maritime security. External border areas, pre-frontier areas as well as contexts and scenarios in Europe's border regions that may in the future be impacted by geopolitical instabilities, hybrid threats, or tensions from outside the EU, and need sustained and improved surveillance and reaction capabilities, could be particularly considered. If they relate to some of the topics covered by Horizon Europe Calls Effective Management of EU External Borders 2021-2022 or 2023-2024, the proposals should convincingly explain how they will build on and not duplicate them.

Proposals may also address capabilities of information exchange, capabilities for detection of illegal activities, and/or solutions that can be deployed efficiently across diverse geographical regions; capabilities for operational event data recording; capabilities to detect irregular activities in areas of terminals for travel (air, sea) or logistics terminals around a Border Control Point, without disrupting the flow of operations; capabilities that support and help the decision-making process and facilitate operating in different scenarios (air, sea, land) simultaneously.

The EBCG Capability Roadmap recognises that future surveillance capabilities that help detect cross-border irregularities and cases requiring Search and Rescue activities are essential. Solutions should be modular and scalable to cater to the regional and challenges specificities.

Examples of technologies and solutions that may be relevant for this topic include but are not limited to: sensing (at tactical, operational, and/or strategic levels), autonomous platforms, vehicles and systems (aerial, ground, surface or underwater, vessel-based or not, mobile or land-borne, etc); interconnectivity between sensors and platforms and automated data fusion; data processing systems; image and signal processing and analysis; robotics; computing

technologies including edge and cloud computing; decision-support systems and human-machine interfaces.

Projects should integrate:

- perspectives of safeguarding and promoting human rights, including gender equality, developing solutions that contribute to those safeguarding and promotion;
- inputs from human rights, law and ethical perspectives, as well as the consideration and views of individuals and society, as well as a gender sensitive approach, as appropriate; proposals can engage with civil society organisations for wider input and support;
- aspects of cybersecurity of the technology proposed, and the protection of communication systems and networks involved in the solutions, if and as relevant.

Proposals that include solutions and/or methods that would contribute to a lower environmental impact and footprint, better cost-efficiency, better energy-efficiency, and/or better operational autonomy of the capabilities and solutions in this topic, would be welcome.

Depending on the particular scope of the proposal, participation of Police and/or Customs Authorities is welcome.

To ensure the active involvement of and timely feedback from relevant security practitioners, proposals should plan a mid-term deliverable consisting in the assessment of the project's mid-term outcomes, performed by the practitioners involved in the project.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL3-2025-01-BM-02: Open topic on secured and facilitated crossing of external borders

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 9.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply:

	<p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>The following additional eligibility criteria apply:</p> <p>This topic requires the active involvement, as beneficiaries, of at least 2 Border or Coast Guard Authorities from at least 2 different EU Member States or Associated Countries. For these participants, applicants must fill in the table “Information about security practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁴¹.</p>
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: Project results are expected to contribute to the following expected outcome(s):

- Improved border crossing experience for travellers and border authorities’ staff (including customs, coast and border guards), while maintaining security and monitoring of movements across EU external borders, supporting the Schengen area, reducing illegal movements of people and goods across those borders and protecting fundamental rights of travellers, both EU citizens and Third Country Nationals.

⁴¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope: Under this topic, proposals are welcome to address new, upcoming or unforeseen challenges and/or creative or disruptive solutions for improving capabilities of practitioners for the secured and facilitated checks of crossings of external borders. Contexts and scenarios in Europe's border regions that may in the future be impacted by geopolitical instabilities or tensions from outside the EU, and need sustained and improved surveillance and reaction capabilities, could be particularly considered. Moreover, mechanisms for detecting the presence of threats in travel flows should be investigated. If they relate to some of the topics covered by Horizon Europe Calls Effective Management of EU External Borders 2021-2022 or 2023-2024, the proposals should convincingly explain how they will build on and not duplicate them.

Proposals may also address capabilities related to possible future digitalised travel credentials (DTC), including though not limited to: Type-1 and Type-2 and forward integration with secure digital citizenship wallet(s); identification and verification in the context of border checks; optimisation of resources in the context of border checks.

According to the European Border and Coast Guard (EBCG) Capability Roadmap, legal border crossings should be as swift and simple as possible, preferably fully automated. Border Crossing Points should also have the ability to detect any unauthorised crossings of persons or goods.

Examples of technologies and solutions that may be relevant for this topic include but are not limited to: secure and private data approaches for applications in border checks; fuzzy searches capabilities; data communication, translation and sharing solutions; biometrics; age assessment methods; fraudulent documents detection; automation, exchange and interoperability for systems involved in border checks.

Projects should integrate aspects of:

- perspectives of safeguarding and promoting human rights, developing solutions that contribute to those safeguarding and promotion;
- inputs from human rights, law and ethical perspectives, as well as the consideration and views of individuals and society and the societal dimension, including a gender sensitive approach, as appropriate; proposals can engage with citizens and civil society for wider input and support;
- aspects of cybersecurity of the technology proposed, and the protection of communication systems and networks involved in the solutions, if and as relevant.

Proposals that include solutions and/or methods that would contribute to a lower environmental impact and footprint, better cost-efficiency, better energy-efficiency, and/or better operational autonomy of the capabilities and solutions in this topic, would be welcome.

Depending on the particular scope of the proposal, participation of Police and/or Customs Authorities is welcome.

To ensure the active involvement of and timely feedback from relevant security practitioners, proposals should plan a mid-term deliverable consisting in the assessment of the project's mid-term outcomes, performed by the practitioners involved in the project.

HORIZON-CL3-2025-01-BM-03: Open topic on better customs and supply chain security

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 9.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>The following additional eligibility criteria apply:</p> <p>This topic requires the active involvement, as beneficiaries, of at least 2 Customs Authorities from at least 2 different EU Member States or Associated Countries. For these participants, applicants must fill in the table “Information about security practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the</p>

	<p>Research and Training Programme of the European Atomic Energy Community (2021-2025).⁴².</p> <p>Beneficiaries must provide financial support to third parties in the form of grants. The maximum amount to be granted to each third party is EUR 100 000 to support the expected outcomes of the topic and effective collaboration and/or coordination with additional relevant national Customs Authorities, including testing and validation activities within the projects.</p>
<i>Security Sensitive Topics</i>	<p>Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.</p>

Expected Outcome: Project results are expected to contribute to the following expected outcome(s):

- Improved customs and supply chain security through better prevention, detection, deterrence, anti-tampering and/or fight of illegal activities involving flows of goods across EU external borders and through the supply chain, and/or through better interoperability, minimising disruption to trade flows.

Scope: Under this topic, proposals are welcome to address new, upcoming or unforeseen challenges and/or creative or disruptive solutions for improving capabilities of practitioners for the security of customs and the supply chain. Contexts and scenarios in Europe's border regions that may in the future be impacted by geopolitical instabilities, tensions from outside the EU or impact on the environment, and need sustained and improved surveillance and reaction capabilities, could be particularly considered. If they relate to some of the topics covered by Horizon Europe Calls Effective Management of EU External Borders 2021-2022 or 2023-2024, the proposals should convincingly explain how they will build on and not duplicate them.

Proposals may also address capabilities related to possible future detection of threats in the flow of goods and/or in the supply chain in a flexible, rapid, relocatable way. Detection capabilities could target one or more type(s) of dangerous, illicit and/or illegal goods or materials, including illicit drugs and their precursors, illegally traded species covered by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) considering the European Deforestation Free Products Regulation, contraband, chemical, biological, radiological, nuclear and explosive (CBRN-E) threats and/or various modi operandi related to cross-border trafficking, including involving cargo.

⁴² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Projects should integrate aspects of:

- perspectives of safeguarding and promoting human rights, developing solutions that contribute to those safeguarding and promotion;
- inputs from human rights, law and ethical perspectives, as well as the consideration and views of individuals and society, as appropriate; proposals can engage with citizens and civil society for wider input and support;
- aspects of cybersecurity of the technology proposed, and the protection of communication systems and networks involved in the solutions, if and as relevant.

Proposals that include solutions and/or methods that would contribute to a lower environmental impact and footprint, better cost-efficiency, better energy-efficiency, and/or better operational autonomy of the capabilities and solutions in this topic, would be welcome.

Depending on the particular scope of the proposal, participation of Police Authorities, Border and/or Coast Guards is welcome.

To ensure the active involvement of and timely feedback from relevant security practitioners, proposals should plan a mid-term deliverable consisting in the assessment of the project's mid-term outcomes, performed by the practitioners involved in the project.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

Proposals should plan their activities opting for the financial support to third parties in order to provide financial support to additional (i.e., beyond those partners in the Consortium) practitioners (i.e., authorities with competences of Customs) to engage during the project for additional piloting, testing and/or validation of technologies or methods. From 5% up to 20% of the EU funding requested by the proposal may be allocated to the purpose of financial support to third parties.

Proposals must clearly describe the objectives and the expected results to be obtained, including the elements listed in the application template. Proposals are also expected to describe the methods and processes relevant to comply with the general eligibility conditions for financial support to third parties set out in General Annex B and to demonstrate effectiveness (impact).

Destination - Resilient Infrastructure

As stated in the Horizon Europe strategic plan 2025-2027, proposals submitted under this Destination should aim to contribute to “[...] resilience of large-scale interconnected systems’ infrastructures and the bodies that operate them in case of complex attacks, pandemics, natural and human-made disasters, or the impacts of climate change[...]”.

This destination will support the implementation of the European Commission political guidelines 2024-2029 for a ‘Safer and more secure Europe’ and ‘Preparedness Union’, while protecting democracy and putting research and innovation at the heart of a resilient economy. Overall, research under this Cluster should continue to focus on preserving and securing citizens’ basic right to feel safe. This destination will support the European Commission efforts towards:

- improving cyber capabilities, coordinating national cyber efforts and securing our critical infrastructures.
- the development of a new European Critical Communication System.
- building climate resilience and preparedness of infrastructure in sectors like energy, water or food, and informing the new European Water Resilience Strategy.

To this end, these proposals should contribute to the achievement of one or more of the following impacts:

- address both physical and digital aspects of critical infrastructure security, including specific challenges for cybersecurity, and
- support development of upgraded systems, and the interoperability of existing systems, for operators’ resilience and the protection of critical infrastructure to enable a rapid, effective, safe and secure response and recovery, as also situational awareness and information sharing, without significant human involvement, to complex threats and challenges while also supporting emergency responders where their intervention is needed;
- security by design is a default feature of both newly created and upgraded infrastructures;
- improve cross-sectoral cooperation, as well as risk assessments to ensure the resilience and open strategic autonomy of European infrastructures.

More specifically, having in mind the fast pace of technological developments, growing dependencies of modern democratic societies, public administration and economies from critical infrastructure, as well as ongoing hybrid threats, and the impacts of climate change, diverse swiftly advancing challenges that European society faces merit dedicated research and innovation actions in the scope of this Destination. Some of these specific challenges are:

- mapping of critical infrastructure interdependencies leading to early threat identification and warning systems, mitigation plans and recovery procedures;
- supply chains of critical infrastructure;
- risk of unmanned platforms attacks on critical infrastructure;
- effective perimeter protection (e.g.: physical barriers, surveillance systems, access control, or cybersecurity measures) and monitoring including large area spanning infrastructure elements;
- new threats and hazards arising from climate change and/or the green transition, including widespread use of renewable energy sources;
- implementation of post-disaster recovery lessons to manage future exposure and vulnerability;
- lack of standards and advanced tools to conduct virtual and physical stress tests (sectoral and cross sectoral).

This destination will continue to support the policy objectives of the directives on the resilience of critical entities (CER Directive⁴³ and on network and information security (NIS2 Directive⁴⁴). Further, submitted proposals should consider policy developments and meet some of the expectations stemming from the following EU legislation and policy documents, whichever would be relevant to the challenges addressed by the proposal:

- Security Union Strategy⁴⁵;
- EU Counter-Terrorism Agenda⁴⁶;
- EU Cybersecurity Strategy⁴⁷;
- NIS2 Directive⁴⁸;
- CER Directive⁴⁹;
- EU Adaptation Strategy⁵⁰;
- EU Maritime Security Strategy⁵¹;
- EU Aviation Security Strategy⁵²;

⁴³ Directive (EU) 2022/2557.

⁴⁴ Directive (EU) 2022/2555.

⁴⁵ COM (2020) 605 final.

⁴⁶ COM (2020) 795 final.

⁴⁷ JOIN (2020) 18 final.

⁴⁸ Directive (EU) 2022/2555.

⁴⁹ Directive (EU) 2022/2557.

⁵⁰ COM (2021) 82 final.

⁵¹ Council of the EU 11205/14 JOIN(2023) 8 final.

- Europe-wide Climate Risk assessment (EUCRA) and Commission Communication on Managing Climate Risks⁵³;
- Joint Framework on Countering Hybrid Threats⁵⁴ and the Joint Communication on Increasing Resilience and Bolstering Capabilities to Address Hybrid Threats⁵⁵;
- EU C-UAS Strategy⁵⁶;
- EU Space Strategy for Security and Defence⁵⁷;
- EU Disaster Resilience Goals⁵⁸;
- EU Cable Security Action Plan⁵⁹.

Plans to build on elements of relevant predecessor projects should be considered, where relevant. It will be important also to take into account how research results can be advanced to deployable solutions after the projects lifetime, utilising validation and capacity-building programmes like the Internal Security Fund, or Digital Europe Programme.

Where possible and meaningful, synergy-building and clustering initiatives with successful actions in the same, or other relevant areas. should be considered, including the organisation of international events in coordination with the Community for European Research and Innovation for Security (CERIS)⁶⁰.

Proposals are invited against the following topic(s):

HORIZON-CL3-2025-01-INFRA-01: Open topic for improved preparedness for, response to and recovery from large-scale disruptions of critical infrastructures

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

⁵² REGULATION (EC) No 300/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 March 2008 on common rules in the field of civil aviation security and repealing Regulation (EC) No 2320/2002

⁵³ COM (2024) 91 final.

⁵⁴ JOIN (2016) 18 final.

⁵⁵ JOIN (2018) 16 final.

⁵⁶ COM (2023) 659 final.

⁵⁷ JOIN (2023) 9 final.

⁵⁸ (2023/C 56/01); COM (2023) 61 final.

⁵⁹ JOIN(2025) 9 final

⁶⁰ https://home-affairs.ec.europa.eu/networks/ceris-community-european-research-and-innovation-security_en

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>The following additional eligibility conditions apply:</p> <p>This topic requires involvement as beneficiaries of at least 3 relevant practitioners from at least 3 different EU Member States or Associated Countries. Depending on the specific proposal submitted, these practitioners should represent one or several of the following portfolios:</p> <ul style="list-style-type: none"> • critical infrastructure operator, • authority responsible for critical infrastructure resilience, • civil protection authority, • law enforcement or private companies delivering security for critical infrastructure. <p>The scale of operation of the above practitioners (national, regional or local) should match the proposal objectives.</p> <p>For these participants, applicants must fill in the table “Information about security practitioners” in the application form with all requested information.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries must provide financial support to third parties in the form of grants. The maximum amount to be granted to each third party is EUR 200 000 to support the expected outcomes of the topic and engagement with SMEs and/or effective collaboration and/or coordination with additional relevant critical infrastructure operator, government authority responsible for critical infrastructure resilience, national authority responsible for overseeing critical infrastructure</p>

	operators, or civil protection authority from EU Member States or Associated Countries. These additional partners involvement must include testing and validation activities in the operational environment.
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: Projects' results are expected to contribute to some or all of the following outcomes:

- Critical infrastructure is more resilient to natural hazards, intentional and accidental harmful human actions, including cyberattacks;
- Critical infrastructure operators and authorities have better mapping of the interdependencies relevant for the addressed sector(s) also in view of better managing potential multi-hazard, cross-sectorial and cross border crisis;
- Critical infrastructure operators and authorities have access to improved monitoring, risk and threat assessment, forecast, and if applicable modelling tools as well as cyber- and physical security solutions;
- Critical infrastructure operators and authorities have access to increased post-incident investigation capabilities contributing to better crisis prevention, preparedness, management and response;
- Effective digital tools to conduct virtual and physical stress tests are available for relevant security practitioners;
- Training curricula for critical infrastructure operators, authorities and/or first responders are developed.

Scope: Under this open topic, proposals are invited to address new challenges, and/or develop innovative solutions to existing challenges in order to increase the resilience of critical infrastructure. Proposals should primarily address sector(s) and/or interdependencies that are not covered, in particular by the past Horizon Europe calls: Resilient Infrastructure 2023 and Resilient Infrastructure 2024. If they relate to some of the topics covered by Horizon Europe Calls Resilient Infrastructure 2021-2022, the proposals should convincingly explain how they will build on their outcomes and not duplicate them.

Adapted to the nature, scope and type of proposed activities, proposals should convincingly explain how they will plan and/or carry out demonstrations, testing or validation of developed tools and solutions. Proposals should also outline the plans to develop possible future uptake and upscaling at regional, national and/or EU level.

To ensure the active involvement of and timely feedback from relevant security practitioners, proposals should plan a mid-term deliverable consisting in the assessment, performed by the practitioners involved in the project, of the project's mid-term outcomes.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

Proposals should plan their activities opting for the financial support to third parties in order to provide financial support to practitioners (critical infrastructure operator, government authority responsible for infrastructure resilience, national authority responsible for overseeing critical infrastructure operators, or civil protection authority) for expanding the proposed work in terms of additional user groups, complementary assessments, technology- or methodology-testing activities and/or to SMEs as additional solution providers. From 10% up to 30% of the EU funding requested by the proposal may be allocated to the purpose of financial support to third parties.

Proposals must clearly describe the objectives and the expected results to be obtained, including the elements listed in the application template. Proposals are also expected to describe the methods and processes relevant to comply with the general eligibility conditions for financial support to third parties set out in General Annex B and to demonstrate effectiveness (impact).

Coordination among the successful proposals from this topic should be envisaged in order to avoid duplication, exploit complementarities, and use opportunities for increased impact. Similarly, coordination with projects funded under HORIZON-CL3-2025-INFRA-01-02: Open topic for role of the human factor for resilience of European critical entities.

HORIZON-CL3-2025-01-INFRA-02: Open topic for role of the human factor for the resilience of critical infrastructures

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection</p>

	<p>of European communication networks.</p> <p>The following additional eligibility conditions apply:</p> <p>This topic requires involvement as beneficiaries of at least 3 relevant practitioners from at least 3 different EU Member States or Associated Countries. Depending on the specific proposal submitted, these practitioners should represent one or several of the following portfolios:</p> <ul style="list-style-type: none"> • critical infrastructure operator, • national or regional authority responsible for critical infrastructure resilience, • civil protection authority, • law enforcement or private companies delivering security for critical infrastructure. <p>For these participants, applicants must fill in the table “Information about security practitioners” in the application form with all requested information.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B.
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: Projects’ results are expected to contribute to some or all of the following outcomes:

- Critical infrastructure is more resilient to natural hazards, intentional and accidental harmful human actions, including cyber attacks;
- Infrastructure operators and authorities have better understanding of human factor for the critical entities resilience;
- Infrastructure operators and authorities have access to improved risk and threat assessment, and forecast;
- Infrastructure operators and authorities have access to increased post-incident investigation capabilities contributing to better crisis prevention;

- Insider threats are effectively tackled, including through innovative, cost-efficient systems for background checks that are in full compliance with privacy;
- Training curricula for infrastructure operators, authorities and/or first responders are developed.

Scope: Under this open topic, proposals are invited to address new challenges, and/or develop innovative solutions or strengthen capabilities to tackle existing challenges taking into account the human factor, for the benefit of resilience of critical infrastructures. The emphasis of the proposals should be on the human dependant abilities of critical infrastructure to cope with an adverse event, including their capacity to prepare for the crisis, absorb the impact, reduce the recovery time, and adapt by reducing future exposure and vulnerabilities.

To ensure the active involvement of, and timely feedback from relevant security practitioners, proposals should plan a mid-term deliverable consisting in the assessment, performed by the practitioners involved in the project, of the project's mid-term outcomes.

Activities proposed within this topic should address both technological and societal dimensions of the tackled challenge in a balanced way. This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of related research and innovation activities.

Coordination among the successful proposals from this topic should be envisaged in order to avoid duplication, exploit complementarities, and use opportunities for increased impact. Similarly, coordination with projects funded under HORIZON-CL3-2025-INFRA-01-01: Open topic for improved preparedness for, response to and recovery from large-scale disruptions of European infrastructure.

Destination - Increased Cybersecurity

The strategic plan 2025-2027 identifies the following impact: *"Increased cybersecurity and a more secure online environment by developing and using effectively EU and Member States' capabilities in digital technologies supporting protection of data and networks aspiring to technological sovereignty in this field, while respecting privacy and other fundamental rights; this should contribute to secure services, processes and products, as well as to robust digital infrastructures capable to resist and counter cyber-attacks and hybrid threats".*

Under this Work Programme, the Commission intends to conclude a contribution agreement entrusting the European Cybersecurity Competence Centre (ECCC) with the implementation of call topics related to Increased Cybersecurity. Please refer to "Indirectly managed action by the ECCC" in the section "Other Actions" of this Work Programme part – including the Appendix providing the call specifications for information purposes. Those specifications incorporate 'expected impacts' set out below.

Expected impacts:

- Support the EU's technological capabilities by investing in cybersecurity research and innovation to further strengthen its leadership, strategic autonomy, digital sovereignty and resilience;
- Help protect its infrastructures and improve its ability to prevent, protect against, respond to, resist, mitigate, absorb, accommodate and recover from cyber and hybrid incidents, especially given the current context of geopolitical change;
- Support European competitiveness in cybersecurity and European strategic autonomy, by protecting EU products and digital supply chains, as well as critical EU services and infrastructures (both physical and digital) to ensure their robustness and continuity in the face of severe disruptions;
- Encourage the development of the European Cybersecurity Competence Community;
- Particular attention will be given to SMEs, who play a crucial role in the cybersecurity ecosystem and in overall EU digital single market competitiveness, by promoting security and privacy 'by design' in existing and emerging technologies.

Destination - Disaster-Resilient Society for Europe

Given the increasing frequency and ever greater impacts of disasters resulting from climate extremes, natural, geohazards and human-made hazards, the EU needs to invest more in improving disaster risk management, tools for first responders and societal resilience. In this respect, along the orientations given in the Horizon Europe strategic plan 2025-2027, the main objectives of this destination supporting the *reduction of losses from natural, accidental and human-made disasters* will be pursued in continuity with the strategic plan 2021-2024.

This destination will support the implementation of the European Commission political guidelines 2024-2029 for a ‘Safer and more secure Europe’, a ‘Preparedness Union’, with ‘Stronger Common Borders’, protecting democracy and putting research and innovation at the heart of a resilient economy. Overall, research under this Cluster should continue to focus on preserving and securing citizens’ basic right to feel safe. This destination will support the European Commission efforts towards:

- enhancing efforts to prevent and prepare for new threats, especially those linked to chemical, biological, radiological and nuclear (CBRN) security.
- continuing to address risks to security from climate change impact / step up work on climate resilience and preparedness.
- supporting medical countermeasures against public health threats.

Moreover, this destination will support the implementation of UN Disaster Risk Reduction policies, the EU Disaster Resilience Goals⁶¹ involving closer coordination with the Union Civil Protection Knowledge Network, the rescEU initiative and Member States’ civil protection authorities, as well as an enhanced dialogue at international level with the United Nations Office for Disaster Risk Reduction (UNDRR) on recommendations for the Sendai Framework⁶² and United Nations Sustainable Development Goals (SDGs). Such closer coordination with other programmes will make it possible to further streamline future research programming. For example, Cluster 3 should focus on its core added value, which is a strong operational character for preparedness, response and learning, while maintaining complementarities with broader prevention issues such as climate-related risks, covered by Cluster 5, and the Mission on Climate Change Adaptation. There are similar examples in closer coordination with Cluster 6 and the One Health approach, regarding, for instance, water and food security threats (as a result of intentional degradation or terrorist acts).

From a technological perspective, the Destination will ensure greater involvement of practitioners in close cooperation with the Member States and EU agencies, not only in research development and implementation, but also the identification of gaps and needs and future research topics. Actions to develop tools and technologies to meet operational capability needs should be aimed at higher technological readiness levels (TRLs). Synergies with existing infrastructures and initiatives, such as Destination Earth for extreme-weather

⁶¹ (2023/C 56/01); COM (2023) 61 final.

⁶² UNDRR, Sendai Framework for Disaster Risk Reduction 2015-2030

events, are encouraged in addressing natural disasters. Finally, it will be important to take into account how research results, both those still to come and those already developed in past projects under the DRS destination, can be turned into deployable solutions by being combined with capacity-building programmes (in particular the Internal Security Fund, funding under the Union Civil Protection Mechanism⁶³ the European Regional Development Fund, and the Cohesion Fund) and social innovation to support the entry into the market of developed technologies. Actions will also aim to ensure that there is a link between R&I and possible procurement (e.g., in the area of medical countermeasures).

Proposals for topics under this Destination should have the overarching objective of improving resilience. Actions will continue to explore initiatives and experiments involving the development of technological or methodological solutions for crisis management and support for emergency responders, getting the general public more involved in this area and improving interactions between regional and/or local authorities, public practitioners, private operators and civil society. Actions could also take into consideration regions vulnerable to extreme weather events in coastal areas, sea level rise and other climate change impacts, which may be prone to disaster risks (e.g. the Arctic). New tools or solutions should build on what has been developed in past projects and be capable of being integrated into existing (legacy) systems. Actions will also focus on multi-service capability developments, in particular tools and technologies to support direct operational needs in case of a disaster. This will be done in a scalable way, covering areas from small rural towns to economically developed ones with a high population density, and opening research initiatives to international cooperation. Capabilities need to be upgraded to match the new resilience stakes and expectations of practitioners and of society as a whole. We should learn from past disaster events by identifying gaps in capabilities that the response to such events showed were lacking. For example, one of such gaps are the availability of medical countermeasures used to effectively respond to deliberate or accidental releases of CBRN substances.

The destination will continue to follow a multi-hazard approach, addressing disasters and threats of all kinds, including their cascading issues, climate-related or natural and geological hazards, industrial accidents, pandemics, intentional hostile acts including terrorism and armed conflict. Particular attention will be paid to floods and wildfires, as well as to chemical, biological, radiological, nuclear and explosive (CBRN-E) threats. To this end, proposals should contribute to the achievement of one or more of the following impacts:

- Enhanced citizen and regional and/or local authorities' involvement in research actions, and in operational measures that may result from research, with focus on risk awareness and enhanced disaster prevention and preparedness, including youth awareness raising and education;
- Improved disaster risk governance (from prevention, preparedness to mitigation, response, deployment of countermeasures and recovery, using updated risk assessment

⁶³ See the UCPM scientific needs assessment on disaster risk management: <https://civil-protection-knowledge-network.europa.eu/media/outcome-report-scientific-research-needs-exercise>.

methods and decision criteria, and including knowledge transfer and awareness of innovative solutions) from international to regional and/or local levels;

- Strengthened capacities of first responders in all operational phases related to any kind of (natural and human-made, including hybrid threats) disasters in support of field operations with validation of tools and technologies used in disaster responses including emergencies, and demonstration of their interoperability.

More precisely, in the context of exacerbated impacts of various disaster threats on vulnerable societies, research and innovation actions are highly needed to face the many challenges faced by European Society. Some of them are:

- Challenges related to inclusion of the general public, regional and/or local communities and voluntary organisations as active partners in order to:
 - o empower citizens to act and help them to improve their disaster risk awareness and own resilience to crises, including accountability for regional and/or local administrative decisions on residual risks, youth awareness raising and education;
 - o provide means for regional and/or local decision-makers and operational responders, i.e., first and second responders. A “second responder” is a worker who supports “first responders” such as police, fire, and emergency medical personnel. They are involved in preparing, managing, returning services, and cleaning up sites during and after an event requiring first responders, including crime scenes and areas damaged by fire, storm, wind, floods, earthquakes, or other natural disasters. These types of services may include utility services (shutdown or reinstatement of electrical, gas, sewage, and/or water services), wireless or wireline communication services, specialty construction (i.e. shelter construction), hazardous waste clean-up, road clearing, crowd control, emergency services (i.e. Red Cross⁶⁴), first aid, food services, security services, social services (i.e., trauma counsellors), and sanitation, infrastructure owners, regional and/or local authorities (including public services, transport and utilities) to coordinate prevention and preparedness actions, bearing in mind the socio-economic and cultural context, and for operational responders to influence regional and/or local planning decisions that affect exposures and vulnerability to risks in short and long term;
 - o address citizens’ perception of, and involvement in, civil defence in the event of very large-scale disasters including armed conflict.
- Challenges regarding the reinforcement of disaster risk governance and the consideration of knowledge and innovative solutions in order to:
 - o improve operational management of crises at different levels (prevention, preparedness, response, recovery) and scales (international to regional and/or local),

⁶⁴ <https://redcross.eu>

- o reinforce the uptake and transfer of knowledge to risk managers, first and second responders and decision-makers;
- o strengthen resilience and enhancing protection strategies for emergency services and healthcare workers in case of disasters;
- o reinforce civil defence capability, looking at all facets of crisis and disaster management, alongside community resilience building;
- o enhance preparedness for optimised detection, prevention, response and control measures in case of bioterrorism or emerging diseases.
- Challenges related to the validation and usability of tools and technologies, including the demonstration of their interoperability, in the context of strengthened first responder's capacities as to:
 - o enhance risk awareness, preparedness and communication about foreseeable impacts of disasters;
 - o deploy innovative solutions in emergency situations including trusted communication channels, medical care, medical countermeasures, support equipment (e.g. detectors), triage of victims as well as protection of first responders;
 - o enhance validation of tools, technologies and processes for cross-border prevention, decision-support and responses to climate-related and geological disasters and emergency crises by different practitioner sectors (firefighters, medical emergency services, civil protection, police, NGOs);
 - o enhance interoperability of tools and technologies used in international emergency (real-case) situations related to natural hazards, CBRN-E threats and hybrid threats via inputs such as standard operating procedures for foresight, risk analysis or guidance with the aim to improve market uptake.

This Destination will also support, whenever appropriate and applicable, the proposals with some or all of the following goals:

- a clear strategy from international to regional and/or local on how the overall society will adapt to the evolving disaster risks based on the subsidiarity principle (from the citizen level to international decision-making);
- the involvement of different responders (firefighters, civil protection, medical emergency, police) and regional and/or local authorities in research, development and validation of methods and tools;
- the active role for Non-Governmental Organisations (NGOs) and Civil Society Organisations (CSOs);

- the active involvement of Small and Medium Enterprises (SMEs);
- a robust plan on how they will build on the relevant predecessor projects, and clustering with existing research (EU and national) actions to maximise complementarities and synergies and avoid duplication of efforts;
- education and training aspects for first and second responders for different types of threats (climate-related, geohazards, accidental, intentional), as well as information sharing and awareness raising of the citizens;
- a clear strategy on the uptake of the outcomes, defined in consultation with the involved stakeholders;
- a well-developed plan both on how research data for training and testing will be obtained, in order to reach the requested Technology Readiness Levels (TRLs), and on how the specific TRL will be measured.

Where possible and relevant, synergy-building and clustering initiatives with successful proposals in the same area should be considered, including the organisation of international conferences in close coordination with the Community for European Research and Innovation for Security (CERIS)⁶⁵ activities and/or other international events.

Proposals are invited against the following topic(s):

HORIZON-CL3-2025-01-DRS-01: Open topic on citizen and regional and/or local authorities' engagement in enhanced disaster risk awareness, including education, and preparedness

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.

⁶⁵ https://home-affairs.ec.europa.eu/networks/ceris-community-european-research-and-innovation-security_en

	<p>The following additional eligibility conditions apply:</p> <p>This topic requires the active involvement, as beneficiaries, of at least 2 Regional and/or Local Authorities, at least 2 organisations representing citizens or regional and/or local communities⁶⁶ and 2 First responders or disaster management authorities⁶⁷ from at least 3 different EU Member States or Associated Countries. For these participants, applicants must fill in the table “Information about security practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio, grants will be awarded to applications not only in order of ranking but at least also to one project that is the highest ranked within each of the two options given in the scope (Option a and Option b), provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁶⁸.</p>

Expected Outcome: Project results are expected to contribute to one or both of the following expected outcomes:

- Improved disaster preparedness, learning from past disasters or crises, and better sharing of knowledge on lessons learned and risk awareness to citizens and regional and/or local

⁶⁶ A Citizen Organisation can be a Non-Governmental Organisation representing citizens interests in the area of civil protection and/or associations of volunteers.

⁶⁷ As an example, contacts of national UCPM authorities are available here: https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/national-disaster-management-system_en

⁶⁸ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

authorities, understanding what countermeasures were taken in previous incidents and exploring currently available products to improve future outcomes;

- Reinforced dialogue and cooperation among scientific and technical communities, stakeholders, policy-makers and regional and/or local communities in disaster risk reduction for an enhanced uptake of research outputs.

Scope: Societal resilience and preparedness to disasters are shaped by the way authorities and citizens exchange, access, understand, and react to information about hazards. As a result, anyone may become more vulnerable if barriers to these processes occur. Strengthening societal resilience to disasters, therefore, requires investment by authorities at operational, strategic, and policy levels to improve engagement with citizens and integrate inclusive communication processes. In order to achieve this, it is important to take into account the diversity of citizens, be it relating to age, gender, educational levels, disability, and other social characteristics.

The European Commission is developing and implementing an EU Preparedness Union Strategy following whole-of-government and whole-of-society approaches. The EU's disaster resilience goal No. 2 is "Prepare – Increasing risk awareness and preparedness of the population"⁶⁹. The proposals' outcomes should especially work towards supporting these two policies and follow the recommendations of the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) to ensure a successful uptake to the end users. Proposals are invited to utilise the Special Eurobarometer on "Disaster risk awareness and preparedness of the EU population"⁷⁰ as evidence of needs.

Under the open topic, proposals are welcome to address new, upcoming or unforeseen challenges and/or creative or disruptive solutions and technology, including the use of AI, for improving disaster preparedness, risk awareness by citizens and regional and/or local authorities, and for reinforcing the cooperation among scientific / technical communities and policy-makers / regional and/or local authorities for an enhanced sharing of knowledge and uptake of research outputs. If they relate to some of the topics covered by Horizon Europe Calls Disaster-Resilient Society 2021-2022 or 2023-2024, the proposals should convincingly explain how they will build on and not duplicate them.

Proposals are expected to address one of the following options:

Option a: Tools and solutions to improve disaster preparedness and risk awareness by citizens and regional and/or local authorities;

Option b: Mechanism to enhance dialogue among research/academic communities, practitioners and regional and/or local authorities for sharing knowledge and effectively uptake research results.

⁶⁹ (2023/C 56/01); COM (2023) 61 final.

⁷⁰ <https://europa.eu/eurobarometer/surveys/detail/3228>

Adapted to the nature, scope and type of proposed projects, proposals should convincingly explain how they will plan and/or carry out demonstration, testing or validation of developed tools and solutions. Furthermore, proposals should outline the plans to develop possible future uptake and upscaling at national and EU level for possible next steps once the project is finalised. Proposals should also consider, build on if appropriate and not duplicate previous research, including but not limited to research by other Framework Programmes' projects. Coordination among the successful proposals from this topic should be envisaged in order to avoid duplication and to exploit complementarities as well as opportunities for increased impact.

Proposals funded under this topic are expected to engage with citizen organisations, regional and/or local authorities and practitioners (first and second responders/civil protection agencies/disaster management authorities), private sector operators during the lifetime of the project, including validating the outcomes, with the aim of facilitating future uptake of innovations for the Disaster Risk Reduction community.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of related research and innovation activities.

HORIZON-CL3-2025-01-DRS-02: Open topic on Improving disaster risk management and governance to ensure self-sufficiency and sustainability of operations in support of enhanced resilience

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Due to the scope of this topic, legal entities established in LAC (Latin America/African/Caribbean) as well as Central Asian Countries⁷¹ are exceptionally eligible for Union funding.</p> <p>The following additional eligibility conditions apply:</p>

⁷¹ https://home-affairs.ec.europa.eu/policies/international-affairs/collaboration-countries/central-asia_en

	<p>This topic requires the active involvement, as beneficiaries, of at least 2 Regional and/or Local Authorities, 1 disaster management authority⁷² and 1 Volunteers Organisation from at least 3 different EU Member States or Associated Countries. For these participants, applicants must fill in the table “Information about security practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio, grants will be awarded to applications not only in order of ranking but at least also to one project that is the highest ranked within each of the two options given in the scope (Option a and Option b), provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁷³.</p>

Expected Outcome: Project results are expected to contribute to the following expected outcome(s):

- Better understanding of the impact of disasters and crises, and improved early warnings and long-term planning linked to natural causes or to human-made threats (including CBRN) on risk governance, including emergency services, regional and/or local authorities, and citizen volunteers, and improved adaptation and resilience of emergency systems for disaster prevention and preparedness – especially in a multi-risk environment with cascading disasters.

⁷² As an example, contacts of national UCPM authorities are available here: https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/national-disaster-management-system_en

⁷³ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope: Improved risk governance, adaptation and resilience requires authorities and communities to adopt risk and resilience management approaches, which are inclusive and innovative, through pre-defined plans and procedures, as well as through adaptable and flexible capabilities to prepare for, respond to, recover from and learn from disasters and crises. It requires the implementation of policies at different levels (international to regional and/or local) and strategies for a better understanding of impacts and enhanced risk preparedness and adaptation, which are co-developed and enabled through *all-of-society* engagement and participation, and hence strengthen resilience to disasters among authorities, decision-makers, private actors, intermediary actors, volunteers and citizens, and the most vulnerable.

The European Commission is developing and implementing an EU Preparedness Union Strategy⁷⁴ following whole-of-government and whole-of-society approaches. The proposals' outcomes should especially work towards supporting the Strategy and follow the recommendations of the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) to ensure a successful uptake to the end users.

Under the open topic, proposals are welcome to address new, upcoming or unforeseen challenges and/or creative or disruptive solutions for an enhanced understanding of impacts of disasters and crises linked to natural or human-made causes on risk governance and improved resilience of emergency systems, that are not covered by topics of Horizon Europe Calls Disaster-Resilient Society 2023-2024. If they related to some of the topics covered by Horizon Europe Calls Disaster-Resilient Society 2021-2022, the proposals should convincingly explain how they will build on and not duplicate them.

Proposals are expected to address one of the following options:

Option a: Enhanced impact forecasting and early warning systems, understanding of climate / weather extreme events and geohazards and adaptation of emergency systems for disaster prevention and preparedness;

Option b: Enhanced impact forecasting and understanding of Chemical, Biological, Radiological, Nuclear, Explosive (CBRN-E) threats and adaptation of emergency systems for disaster prevention preparedness and response (including medical countermeasures). Projects do not need to address all elements of CBRN-E.

Adapted to the nature, scope and type of proposed projects, proposals should also convincingly explain how they will plan and/or carry out demonstration, testing or validation of developed tools and solutions. Furthermore, proposals should outline the plans to develop possible future uptake and upscaling at national and EU level for possible next steps once the project is finalised. Proposals should also consider, build on if appropriate and not duplicate previous research, including but not limited to research by other Framework Programmes' projects. Coordination among the successful proposals from this topic should be envisaged in

⁷⁴ Europe's choice – Political guidelines for the next European Commission 2024-2029, p. 14.

order to avoid duplication and to exploit complementarities as well as opportunities for increased impact.

Proposals funded under this topic are expected to engage beyond the project consortium with volunteers' organisations, regional and/or local authorities and disaster management authorities during the lifetime of the project, including validating the outcomes, with the aim of facilitating future uptake of innovations for the Disaster Risk Reduction community.

To ensure the active involvement of and timely feedback from relevant practitioners, i.e., emergency responders (with expertise in the different types of natural or human-made threats), proposals should plan a mid-term deliverable consisting in the assessment, performed by the practitioners involved in the project, of the project's mid-term outcomes.

Due to the scope of this topic, legal entities established in LAC (Latin America and Caribbean), African, and Central Asian countries are encouraged to participate.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of related research and innovation activities.

HORIZON-CL3-2025-01-DRS-03: Open topic on testing / validating tools, technologies and data used in cross-border prevention, preparedness and responses to climate extreme and geological events and chemical, biological or radiological emergency threats

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 13.50 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>Due to the scope of this topic, legal entities established in LAC (Latin America/African/Caribbean) as well as Central Asian Countries⁷⁵ are exceptionally eligible for Union funding.</p>

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https://home-affairs.ec.europa.eu/policies/international-affairs/collaboration-countries/central-asia_en

	<p>The following additional eligibility conditions apply:</p> <p>This topic requires the active involvement, as beneficiaries, of at least 2 First responders or disaster management authorities⁷⁶ and 2 SMEs from at least 3 different EU Member States or Associated Countries. For these participants, applicants must fill in the table “Information about security practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL of 7-8 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio, grants will be awarded to applications not only in order of ranking but at least also to one project that is the highest ranked within each of the options (Option a, Option b and Option c, Option d), provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁷⁷</p> <p>Beneficiaries must provide financial support to third parties in the form of grants. The maximum amount to be granted to each third party is EUR 100 000 to support the expected outcomes of the topic and effective collaboration and/or coordination with relevant First Responders covering different disciplines and sectors of intervention, including testing and validation activities within the projects, and/or SMEs from EU Member States or Associated Countries.</p>

⁷⁶ As an example, contacts of national UCPM authorities are available here: https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/national-disaster-management-system_en

⁷⁷ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.
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Expected Outcome: Project results are expected to contribute to the following expected outcome(s):

- Enhanced European and global interoperability of existing tools and technologies and improved capacities to prevent, better prepare and respond to different types of disasters (natural and human-made) by various practitioners (e.g., firefighters, medical responders, civil protection).

Scope: The use of artificial intelligence (AI) and machine-learning (ML) tools is increasingly at the core of first responder's decision-making processes, including situational awareness, analysis and planning. Besides the needs to develop AI and ML tools, ground technologies such as miniaturised sensors that can operate autonomously for a long period in harsh environments and are fast and easy to deploy are needed for threat detection (such as chemical, biological or radiological substances) and/or identification of victims and possible locations for intervention. In addition, responders need to exchange information (language, data, video, etc.) in a reliable, secure, and universal way, while emergency communications throughout the European Union also need to be strengthened⁷⁸. In many instances, interoperability of tools, technologies and communication channels is still an open issue, requiring standard operating procedures, specific education, training and exercises of responders.

The European Commission is developing and implementing an EU Preparedness Union Strategy⁷⁹ following whole-of-government and whole-of-society approaches. The proposals' outcomes should especially work towards supporting the Strategy and follow the recommendations of the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) to ensure a successful uptake to the end users. Under the open topic, proposals are welcome to testing / validate tools, technologies and data used in cross-border prevention, preparedness and responses to climate / geological / accidental fire disasters and chemical, biological or radiological emergency threats (including medical countermeasures) by different practitioner's sectors in view of demonstrating their interoperability in real-case situations, with focus on the use of AI and ML tools, miniaturized sensors for threat detection and victim identification, and communication (including cross-border emergency communications).

Proposals are expected to address one of the following options focused on testing / validation of tools and technologies, and demonstration of their interoperability:

⁷⁸ Critical Communication System (EUCCS). See e.g., Commission White Paper on "How to master Europe's digital infrastructure needs?" (2024).

⁷⁹ Europe's choice – Political guidelines for the next European Commission 2024-2029, p. 14.

Option a: Use of artificial intelligence (AI) / machine learning (ML) tools to support first responder's analysis, planning and decision-making;

Option b: Miniaturized sensors for threat detection and victim identification;

Option c: Information exchange / Communication among first responders in a reliable, secure and universal way, and cross-border emergency communications;

Option d: Alert system to detect CBRN threats, integrating different systems at national, regional and European levels.

Adapted to the nature, scope and type of proposed projects, proposals should also convincingly explain how they will plan and/or carry out demonstration, testing or validation of developed tools and solutions. Furthermore, proposals should outline the plans to develop possible future uptake and upscaling at national and EU level for possible next steps once the project is finalised. Proposals should also consider, build on if appropriate and not duplicate previous research, including but not limited to research by other Framework Programmes' projects. Coordination among the successful proposals from this topic should be envisaged in order to avoid duplication and to exploit complementarities as well as opportunities for increased impact.

Proposals funded under this topic are expected to engage beyond the project consortium with disaster management authorities, Industry/SMEs and Standardisation Organisations during the lifetime of the project, including validating the outcomes, with the aim of facilitating future uptake of innovations for the Disaster Risk Reduction community.

To ensure the active involvement of and timely feedback from relevant practitioners, i.e., First Responders with expertise in the different types of natural or human-made threats, proposals should plan a mid-term deliverable consisting in the assessment, performed by the practitioners involved in the project, of the project's mid-term outcomes.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

Proposals that include solutions and/or methods that would contribute to a lower environmental impact and footprint, better cost-efficiency, better energy-efficiency, and/or better operational autonomy of the capabilities and solutions in this topic, would be welcome.

Proposals should plan their activities opting for the Financial Support to Third Parties in order to provide financial support to practitioners (first responders / disaster management authorities) for expanding the proposed work in terms of additional user groups, complementary assessments, technology- or methodology-testing activities and/or to SMEs as additional solution providers. From 5% up to 20% of the EU funding requested by the proposal may be allocated to the purpose of financial support to third parties.

Proposals must clearly describe the objectives and the expected results to be obtained, including the elements listed in the application template. Proposals are also expected to describe the methods and processes relevant to comply with the general eligibility conditions for financial support to third parties set out in General Annex B and to demonstrate effectiveness (impact).

Due to the scope of this topic, legal entities established in LAC (Latin America and Caribbean), African, and Central Asian countries are encouraged to participate.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of related research and innovation activities.

HORIZON-CL3-2025-01-DRS-04: Advancing autonomous systems and robotics for high-risk disaster response, strengthening disaster resilience in conflict-afflicted crisis zones

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <p>This topic requires the active involvement, as beneficiaries, of at least three first responders' organisations or agencies from at least three different EU Member States or Associated Countries, including Ukraine.</p> <p>For these participants, applicants must fill in the table "Information about security practitioners" in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>The participation of at least one entity from Ukraine in the consortium is mandatory.</p> <p>If projects use satellite-based earth observation, positioning, navigation</p>

	and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B.

Expected Outcome: Projects' results are expected to contribute to some or all of the following outcomes:

- To develop and/or adapt a Multi-Function Autonomous Systems for High-Risk Scenarios, which can navigate the unique challenges posed by conflict-driven disasters, such as unstable structures and heavily obstructed urban environments. This system will perform or support civilian tasks like search and rescue, hazard assessment, and supply transport in areas too dangerous for human responders;
- Enhanced remote sensing and situational awareness, creating sensor-based technologies that improve situational awareness for first responders and decision-makers, enabling them to assess disaster zones remotely and safely;
- Autonomous navigation and search capabilities in dangerous environments focusing on technologies that enhance the ability of autonomous systems to perform search operations in low-visibility or smoky conditions, typical of areas impacted by bombings, fires, or other conflict-related incidents;
- User-centred and real-world testing in environments that replicate the conditions of conflict zones and urban disasters;
- Capacity building and training for autonomous system deployment providing specialised training guidelines for first responders and civil protection agencies to operate and maintain autonomous systems effectively in conflict scenarios.

Scope: Conflicts such as the Russian war against Ukraine and the overall geopolitical context marked by tensions and conflicts make it more pressing than ever to ensure that responders are equipped with advanced tools that not only enhance their capabilities, but also protect their lives and increase operational efficiency in extreme environments. These crises demand a new level of preparedness and resilience, where autonomous systems using cutting-edge technologies work in unison to support swift, coordinated, and safe responses.

In light of the ongoing conflicts and the complex, high-risk environments they present, this topic focuses on developing and deploying advanced autonomous systems specifically tailored for large-scale, multi-dimensional disasters and tailored to the challenges of conflict driven. These disasters, exacerbated by geopolitical conflict, severe infrastructure damage, and immediate safety threats to both civilians and responders, demand innovative and resilient solutions. The topic seeks to address the EU's critical need for tools that protect infrastructure, services, and populations while enhancing resilience and operational readiness.

Through rigorous real-world testing and capacity-building programs, responders will be trained to integrate and manage these autonomous systems effectively, preparing them for rapid deployment in high-stakes scenarios. The project will focus on delivering innovative, durable, and efficient technological solutions that allow responding effectively to crises similar in complexity and danger in environments similar to the one of the war in Ukraine. By developing tools that address the unique operational and safety challenges posed by such scenarios, this topic will reinforce the EU's preparedness to protect both citizens and first responders, ensuring swift, coordinated responses to complex crises across Europe and beyond.

Within this topic, the European Commission encourages all potential participants to create, where possible, opportunities for the affected persons and entities, in particular researchers and innovators previously active in Ukraine as well as Ukrainian researchers and innovators who are unable to return to Ukraine in the given circumstances.

Destination - Strengthened Security Research and Innovation

Since the Preparatory Action for Security Research⁸⁰ the EU-funded security research and innovation programme has contributed substantially to knowledge and value creation in the field of internal security. The programme has been fundamental to the consolidation of a European security ecosystem, which is better equipped to capitalise on research and innovation outcomes to support the EU security priorities. This Destination aims to contribute to reducing thematic fragmentation, bringing closer together the actors from different security domains, and expanding the market beyond traditional thematic silos. It also creates knowledge and value through research in matters (including technology, but also social sciences and humanities) that are not exclusive of only one security area, but cross-cutting to the whole Cluster.

As underlined in the Horizon Europe strategic plan 2025-2027, proposals for the topics under this Destination *‘should support with cross-cutting actions the expected impacts outlined above [in the Cluster 3 Destinations]. The destination will increase the impact of the work carried out in the EU security Research and Innovation (R&I) ecosystem and contribute to its core values, namely:*

- *a focus on the potential and practical final use of the outcomes of security R&I;*
- *forward-looking planning of EU security capabilities;*
- *the development of security technologies that are socially acceptable, developed in quadruple helix⁸¹ and that have added value for industrialisation, joint procurement, commercialisation, and the acquisition and deployment of successful R&I outcomes;*
- *safeguarding the EU’s open strategic autonomy and technological sovereignty in critical security areas by contributing to a more competitive and resilient EU civil security technology and industrial base;*
- *experimenting with research and innovation programming; and*
- *helping to make the European R&I ecosystem more consistent’.*

Many of the programme outcomes have materialised in relevant scientific findings, maturation of promising technology areas, operational validation of innovative concepts or support to policy implementation. However, a key challenge remains in improving innovation uptake and thus contributing to the development of security capabilities⁸², support of Start-ups

⁸⁰ COM(2004) 72.

⁸¹ Through the interaction of public authorities, academia, industry and the public.

⁸² For the purpose of the work programme, the terms “Capability” should be understood as “the ability to pursue a particular policy priority or achieve a desired operational effect”. The term “capability” is often interchanged with the term “capacity”, but this should be avoided. “Capacity” could refer to an amount or volume of which one organisation could have enough or not. On the other hand, “capability” refers to an ability, an aptitude or a process that can be developed or improved in consonance with the ultimate objective of the organisation.

and Small-Medium Enterprises (SMEs) and deployment of innovation by security practitioners.

The extent to which innovative technologies developed thanks to EU R&I investment are industrialised and commercialised by EU industry, and acquired and deployed by end-users, could reflect the impact achieved with the programme. As explained in the Commission staff working document on Enhancing security through research and innovation⁸³ there are factors inherent to the EU security ecosystem (often attributed to the market) that hinder the full achievement of this impact, such as market fragmentation, cultural barriers, analytical weaknesses, programming weaknesses, ethical, legal and societal considerations or lack of synergies between funding instruments, among others. To that aim, there is a need to create a favourable environment that is designed with the main purpose of increasing the impact of security R&I, which provides the right tools that serve to tackle the factors that hinder innovation uptake.

Therefore, security research and innovation should foster and enhance the development of innovative tools, technologies and capabilities for the benefit of practitioners that can use in their day-to-day work. To this end proposals under this Destination should set out a credible pathway to contributing to the following impacts:

- A more effective and efficient evidence and knowledge-based development of EU civil security capabilities built on a stronger, more systematic and analysis-intensive security research and innovation cycle;
- Increased cooperation between demand and supply market actors, including with actors from other domains, fosters swift industrialisation, commercialisation, adoption and deployment of successful outcomes of security research and reinforces the competitiveness and resilience of EU security technology and industrial base and safeguards the security of supply of EU-products in critical security areas;
- R&I-enabled knowledge and value in cross-cutting matters reduces sector specific bias and breaks thematic silos that impede the proliferation of common security solutions.

The Destination will trigger actions that will help bringing these and other developments closer to the market, thus contributing to the measures facilitating the uptake of innovation. Those actions will help developers (including industry, research organisations and academia) to accelerate product development and improve the valorisation of their research investment. They will also support buyers and users in materialising the uptake of innovation and further develop their security capabilities. The aim is to increase the capacity of EU public procurers to align their requirements with the EU security industrial capacity and to attract innovation and innovators from security and other sectors through common validation strategies, rapid innovation, experimentation and pre-commercial procurement.

⁸³ https://home-affairs.ec.europa.eu/document/download/ff888398-0b0a-4511-9717-ad41beb22314_en?filename=SWD-2021-422_en.PDF

Finally, the Destination will contribute to the development of the tailored analytical capacity required for the adoption of capability-driven approaches aimed at fostering a forward-looking capability-driven approach in security.

Where possible and relevant, synergy-building and clustering initiatives with successful proposals in the same area should be considered, including the organisation of international conferences in close coordination with the Community for European Research and Innovation for Security (CERIS)⁸⁴ activities and/or other international events.

Proposals are invited against the following topic(s):

HORIZON-CL3-2025-01-SSRI-01: National Contact Points (NCPs) in the field of security and cybersecurity fostering the links with National Community building for Safe, Secure and Resilient Societies

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility conditions apply:</p> <p>Applicants must be Horizon Europe national support structures (National Contact Points - NCPs),</p> <p>NCP) responsible for Cluster 3 and officially nominated to the European Commission from an EU Member State or an Associated Country.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant</i>	The rules are described in General Annex G. The following exceptions apply:

⁸⁴ https://home-affairs.ec.europa.eu/networks/ceris-community-european-research-and-innovation-security_en

<i>Agreements</i>	Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of prizes/grants. The maximum amount to be granted to each third party is EUR 60 000.
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Expected Outcome: Project results are expected to contribute to some or all of the following outcomes:

- Improved and professionalised NCP⁸⁵ service of knowledge, experience and skills, consistent across Europe, thereby helping simplify access to Horizon Europe calls, lowering the entry barriers for newcomers, and raising the average quality of proposals submitted;
- Harmonised and improved trans-national cooperation between NCPs, and support of National communities for research and innovation in the area of security that can collect input from practitioners, industrial partners and convey capability needs.; Increased cooperation of NCPs with seamless collaboration of the national initiatives, with the EU initiatives, namely CERIS⁸⁶;
- Periodic and timely evidence-based feedback in support to EU-funded security research programming enabled by a seamless integration of the national, regional and local dimensions of security Research and Innovation into the EU picture;
- A systematic assessment of the needs of the various stakeholders involved in the areas of security and increase the visibility of capability needs, gaps, and technology solutions expressed by national, regional and local communities;
- Improvement of the awareness of EU funding opportunities relevant for civil security research and innovation;
- Improvement of the awareness of innovation-uptake success stories stemming from the participation of national players in EU-funded security research projects;
- Reduced geographical fragmentation of the civil security research and innovation community via the cooperation with the various initiatives of National Communities of security research and innovation with the participation of stakeholders from the security ecosystem, that are set up and running in the different Member States or Associated Countries.

Scope: National Contact Points (NCPs) are support structures that have become an essential component in the implementation of successive Framework Programmes. They provide information and on-the ground advice to potential applicants and beneficiaries, through the

⁸⁵ <https://horizoneuropencpportal.eu/>

⁸⁶ https://home-affairs.ec.europa.eu/networks/ceris-community-european-research-and-innovation-security_en

project life cycle, in their own language, in a manner that would be impossible for the European Commission and its Agencies acting alone.

NCPs can benefit in their work from the sharing of best practices among them. NCPs can also help to give visibility to different perspectives of all Security Research and Innovation (R&I) stakeholders and to break geographical silos by aggregating the knowledge existing in the EU Member States and regions and incorporate it to the European picture. This set-up increases the visibility of the security at EU level and across security areas.

However, the security sector exhibits a remarkable geographic fragmentation, with actors operating at EU level, at national level, at regional level and even at local level. In order to acknowledge the different perspectives of all stakeholders and break geographical silos, there is a need to aggregate the knowledge existing in the Member States and Associated countries and incorporate it to the European picture.

Cooperation with national stakeholders and establishment of stronger links with the Community for European Research and Innovation for Security (CERIS)⁸⁷.

These links should help to have a more comprehensive view of the common EU security needs and solutions, to better capitalise on pan-European cooperation and funding opportunities, and to give visibility to results from EU and other research projects.

Proposals should link NCPs with national communities for research and innovation that exist already or will be established. The idea of this link is to identify capability gaps, solutions to address those gaps, and research needs at local, regional and national level and integrate them in the EU picture in collaboration with CERIS.

In addition, this collaboration will assist NCPs to share research opportunities coming from national research programmes and initiatives with the wider security research community at national level. This will also improve the visibility of the results achieved by national players following their participation in research projects (national or EU-funded), and in particular those which have led to the deployment of solutions in the field of operations, or which have a strong potential for uptake as a result of the interest expressed by national buyers.

Finally, this will support the promotion of innovation uptake with financial pathways and opportunities to enable the uptake of innovative solutions stemming from EU, national or regional capacity building funds, with special emphasis on the EU Home Affairs funds (both in the parts under shared management and those under direct management by the Commission) and on the European Regional Development Fund.

As an output of the action, the beneficiaries should develop a model for the cooperation and enlargement of with the national research and innovation communities beyond the lifetime of the project and independent of EU security research funding. The objective is to support the establishment of self-standing national communities beyond the duration of the project.

⁸⁷ https://home-affairs.ec.europa.eu/networks/ceris-community-european-research-and-innovation-security_en

The successful proposal will contribute to delivering the Programme's objectives and impacts and raise awareness of potential applicants for calls under Horizon Europe Cluster 3 – "Civil Security for Society". Irrespectively of their sector or discipline, project proposals should aim to facilitate trans-national co-operation between NCPs, with a view to identifying and sharing good practices and raising the general standard of support to Programme applicants. The project should also allow for a better flow of information relevant for the implementation of the Programme from the EU level to the national level and vice-versa, and also across Member States and Associated Countries. This includes fostering the participation of national players in EU security research and innovation fora. Particular attention should be given to results that have led to the deployment of solutions in the field of operations, or that show a strong potential for uptake because of the interest expressed by national buyers.

Proposals should link up potential participants from widening countries with emerging consortia in the domain of the Cluster "Civil Security for Society" building on previous initiatives from similar past projects. Matchmaking should take place by means of online tools, brokerage events, info days and bilateral meetings between project initiators and candidate participants from widening countries. Other matchmaking instruments may be used as appropriate. The project proposal to be funded should cover a wide range of activities related to Horizon Europe, address issues specific to the Cluster "Civil Security for Society" and may follow up on the work of SEREN5.

The network should organise matchmaking activities in accordance with Annex IV of the NCP Minimum Standards and Guiding Principles. Proposals should also take into account support activities for coordination between the respective beneficiary (NCP) and the respective National Coordination Centre⁸⁸ within the relevant Member States as applicable once the regulation mentioned above is in force.

The project consortium should have a good representation of experienced and less experienced NCPs.

The recommended duration of the project is 3 years.

HORIZON-CL3-2025-01-SSRI-02: Uptake Acceleration Services

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.

⁸⁸ National Coordination Centres according to regulation (EU) 2021/887 of the European Parliament and of the Council of 20 May 2021.

<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility conditions apply:</p> <p>Participation as beneficiaries of at least 2 Research and Technology Organisations is required.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of prizes/grants. The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: Projects' results are expected to contribute to some or all of the following outcomes:

- To offer advanced services on innovation uptake to the security community;
- To provide a self-sustained mechanism for advanced advisory and support services, to act as a market catalyst; and to accelerate the uptake of innovation for security;
- Enhanced cooperation between research institutions, smaller private research agencies, security practitioners, Start-ups and SMEs to support innovation uptake;
- Strengthening the technology transfer from research to the market and strengthening of security ecosystem. Supporting Start-ups and SME to reach the security market and strengthen the capacity of security practitioners to uptake innovative tools from the security market.

Scope: The uptake of innovation stemming from EU-funded security research is not a single-step process, and there is no single method of ensuring the market uptake of successful research results. Innovation uptake needs to be contemplated as a long process that is conditioned by a number of enabling actions to be taken before research is even planned and long after it is completed. However, market uptake and deployment of innovation by security practitioners are recurrent challenges in civil security research.

The EU-funded security research ecosystem has changed the traditional relationship between practitioners and solution providers. The awareness of security needs and solutions has been steadily growing at all levels during the last years, with EU funded security research and innovation projects playing a pivotal role. This awareness guarantees not only that research addresses critical needs, but also that the research investment will deliver tangible results.

There are several approaches to achieve a better market uptake and to ensure that innovation can pass from the realm of research to the realm of the market and eventually innovative tools to be used by security practitioners.

In order to support SMEs and start-ups but also practitioners to find the avenues of uptake of innovation, models and methods for transferring research to the market should be promoted. This topic aims to offer services and guidance to entities in the security ecosystem to achieve market uptake.

The services should be delivered to SMEs/Start-ups and Practitioners. Therefore, there would be Supply-oriented Services and Demand-oriented services.

Some of the expected services could be open for the whole community (e.g., material online) and examples of good practices, whereas others would be provided upon specific request by an entity (on demand services). On demand services may be linked to other EU-funded actions but should not cover activities already funded from those in order to avoid double funding.

Applicants should be able to demonstrate a proven experience in technology development and innovation in the area of security and deep knowledge on the security ecosystem.

Successful candidates should be able to provide services such as:

- Funding & procurement guidance
- Market research / competitive landscaping / Marketplaces / Market surveys/consultations
- Proof of concept development (for TRL 2-4)
- Funding and tendering observatory
- Investor search / venture building
- Technology validation support Lab testing support (i.e., Readiness assessment, Artificial Intelligence act compliance, Machine Learning security, Ethical Legal and Societal assessment, High Performance Computing capabilities, Synthetic data generation, Access to Datasets, stress testing etc.)
- Tech and/or entrepreneurial skills development (training)

The proposals should outline the methods and processes by which they intend to decide which organisations they provide support to, respecting principles such as transparency, equal treatment, non-discrimination between organisations and effectiveness (impact). The project should provide suggestions for such methods and processes as deliverable to be approved by the European Commission. The applicants submitting the proposals have to ensure sufficient representativeness of the communities of interest (including, but not only, geographical representativeness) and a balanced coverage in terms of knowledge and skills of the different knowledge domains required to face the challenge, including security operations,

technologies, research & innovation, industry, market, etc. The applying consortia need to demonstrate that the project beneficiaries guarantee the expertise required to steer the project activities in all the knowledge domains to ensure the success of the action. The work of the partners has to be supported by solid and recognised tools and methods, also accompanied by the required expertise to put them in practice.

Proposals should take into account the work initiated by the Networks of Practitioners funded under H2020 Secure Societies work programmes and the ongoing work of Knowledge Networks. Proposals should build to the extent possible on the outcomes of previous initiatives that foster innovation uptake (e.g., iProcureNet⁸⁹ Multirate⁹⁰, etc). In addition, existing initiatives like Horizon Booster⁹¹ EACTDA⁹² and EAFIP⁹³ have some components which could be used by the successful project and to be adapted in the area of security.

The project has to identify and describe options for the sustainability of the services beyond the project lifetime, including the setting up of a permanent scheme which will continue to offer the proposed services to the community as a self-sustainable mechanism.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

The project should have a maximum estimated duration of 5 years.

The provision of financial support to third parties in the form of grants is optional.

HORIZON-CL3-2025-01-SSRI-03: Open grounds for pre-commercial procurement of innovative security technologies

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply:

⁸⁹ <https://www.iprocurenet.eu/>

⁹⁰ <https://www.multirate.eu/>

⁹¹ <https://www.horizonresultsbooster.eu/>

⁹² <https://www.eactda.eu/>

⁹³ <https://eafip.eu/>

	<p>The following additional eligibility conditions apply:</p> <p>This topic requires the participation, as beneficiaries, of at least 6 end-user organisations as well as at least 3 public procurers. One beneficiary can have the role of end-user and public procurer simultaneously, both counting towards the number of such entities required for the additional eligibility condition. These beneficiaries must be from at least 3 different EU Member States or Associated Countries. For these participants, applicants must fill in the table “Information about security practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>Open market consultations carried out during this project must take place in at least three EU Member States or Associated Countries.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁹⁴.</p>

Expected Outcome: Projects’ results are expected to contribute to some or all of the following outcomes:

- Consolidated demand for innovative security technologies built on the aggregation of public buyers with a common need expressed in functional and/or operational terms without prescribing technical solutions;
- Better informed decision-making related to investment in innovative security technologies based on a better understanding of the potential EU-based supply of technical alternatives that could address common needs of EU public buyers;
- Better informed decision-making related to investment in innovative security technologies based on an improved visibility of the potential demand in the EU market for common security technologies;
- Increased capacity of EU public procurers to align requirements with industry and future products and to attract innovation and innovators from security and other sectors through

⁹⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

common validation strategies, rapid innovation, experimentation and pre-commercial procurement;

- Increased innovation capacity of EU public procurers through the availability of innovative tendering guidance, commonly agreed validation strategies and evidence-based prospects of further joint procurement of common security solutions.

Scope: End-users and public procurers from several countries are invited to submit proposals for a preparatory action that should build the grounds for a future Pre-Commercial Procurement (PCP) action. Both this preparatory action and the future PCP action are open to proposals oriented to the acquisition of Research and Development (R&D) services for the development of innovative technologies, systems, tools or techniques to enhance border security, to fight against crime and terrorism, to protect infrastructure and public spaces, and/or to make societies more resilient against natural or human-made disasters.

In preparing the grounds for a possible future PCP action, the outputs of this Coordination and Support Action (CSA) should take into consideration:

- The policy priorities described in this Work Programme Part for the security areas mentioned above;
- The EU Directive for public procurement and in particular with the provisions related to PCP;
- The specific provisions and funding rates of PCP actions and the specific requirements for innovation procurement (PCP/PPI) supported by Horizon Europe grants, as stated in the General Annex H of the Horizon Europe Work Programme;
- The guidance for attracting innovators and innovation, as explained in the European Commission Guidance on Innovation Procurement C(2021) 4320, in particular those measures oriented to reduce the barriers to high-tech start-ups and innovative SMEs.

During the course of the project, the applicants are expected to deliver clear evidence on a number of aspects in order to justify and de-risk a possible follow-up PCP action, including:

- That the challenge is pertinent and that indeed a PCP action is required to complete the maturation cycle of certain technologies and to compare different alternatives;
- That there is a consolidated group of potential buyers with common needs and requirements which are committed to carry out a PCP action in order to be able to take an informed decision on a future joint procurement of innovative solutions;
- That there is a quantifiable and identifiable community of potential buyers (including and beyond those proposed as beneficiaries in the proposal) who would share to a wide extent the common needs and requirements defined and who could be interested in exploring further joint-uptake of solutions similar to those developed under the PCP,

should these prove to be technologically mature and operationally relevant by the end of the project;

- That the state of the art and the market (including research) has been explored and mapped, and that there are different technical alternatives to address the proposed challenge;
- That a future PCP tendering process is clear, that a draft planning has been proposed and that the supporting documentation and administrative procedures will be ready on due time in order to launch the call for the acquisition of R&D services according to the PCP rules;
- That the technology developments to be conducted in the future PCP can be done in compliance with European societal values, fundamental rights and applicable legislation, including in the area of free movement of persons, privacy and protection of personal data;
- That in developing technology solutions, societal and gender aspects (e.g., perception of security, possible side effects of technological solutions, societal resilience) can be taken into account in a comprehensive and thorough manner.

If the applicants intend to submit a proposal for a follow-up PCP in a future Horizon Europe Cluster 3 Work Programme, they should ensure that the above evidence is consolidated in the project deliverables of this CSA before the submission of the PCP proposal.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

The project should have a maximum estimated duration of 1 year.

HORIZON-CL3-2025-01-SSRI-04: Accelerating uptake through open proposals for advanced SME innovation

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility</i>	The conditions are described in General Annex B. The following

<i>conditions</i>	<p>exceptions apply:</p> <p>The following additional eligibility conditions apply:</p> <p>Consortia must include, as beneficiaries:</p> <ul style="list-style-type: none"> - A minimum of three (3) to a maximum of seven (7) partners. - At least 2 SMEs from 2 different Member States. - At least 1 end-user organisation in the areas addressed by the proposal, namely one of the following options: <ul style="list-style-type: none"> • Option A "Fighting Organised Crime and Terrorism" • Option B "Disaster-Resilient Society" • Option C "Resilient Infrastructure" and • Option D "Border Management", provided that the applications attain all thresholds. <p>Participation of non-SME industries and Research and Technology Organisations (RTOs) is not excluded, but it must be limited to 15% of the budget.</p> <p>At least 50% of the budget must be allocated to SMEs.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>Eligible proposals submitted under this topic and exceeding all the evaluation thresholds will be awarded a STEP Seal [https://strategic-technologies.europa.eu/about/step-seal_en].</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁹⁵.</p>

⁹⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Expected Outcome: Projects' results are expected to contribute to some or all of the following outcomes:

- Development of a mature technological solution addressing EU security policy priorities in the areas addressed by the Cluster 3 work programme and in particular the destination of fighting crime and terrorism, disaster resilient societies, border management and resilient infrastructure.
- Facilitated access to civil security market for small innovators;
- Improved cooperation between public buyers and small supply market actors for a swifter uptake of innovation in response to short to mid-term needs;
- Stronger partnerships between small and medium EU security industry and technology actors to ensure the sustainability of the EU innovation capacity in the civil security domain and reduce technological dependencies from non-EU suppliers in critical security areas.

Scope: Europe's 25 million small and medium enterprises (SMEs) are the backbone of the EU economy. SMEs can bring innovation to societal challenges, including the security of EU citizens. Innovative SMEs and high-tech start-ups can transform and modernise EU security capabilities.

However, despite the innovation capacity of EU SMEs, these often experience difficulties in finding their way to the public markets. These include red tape in public contracts, access to new customers, access to finance, industrial competition and IP valorisation. These difficulties are exacerbated in markets that show restrictions of different kind, as it is the case of security.

Knowing that SMEs require additional support to reach the security buyers and that the collaboration opportunities offered by the projects of the Pillar II of Horizon Europe can be a catalyst for uptake, this topic aims to offer a collaborative environment for small and medium innovators to tailor their innovations to the specific needs of civil security end-users.

Applicants are invited to submit proposals for technology development along with the following principles:

- Focus on mature digital technological solutions aligned with STEP guidance⁹⁶ addressing EU security policy priorities in the areas addressed by the Cluster 3 Work Programme;
- Fostering collaboration between SMEs from different Member States and Associated Countries;

⁹⁶ For more information on STEP guidance - see the [Guidance Note concerning certain provisions of Regulation \(EU\) 2024/795 establishing the Strategic Technologies for Europe Platform \(STEP\)](#)

- Involving security end-users in the role of validator and potential first-adopter of the proposed innovations;
- Fostering collaboration schemes between small companies and research and technology organisations and/or big industrial players aimed at fostering innovative technology transfer or creating innovative business models that facilitate access to market and strengthen the innovation capacity of EU SMEs and start-ups in the domain of civil security.

Examples of activities to plan in the proposed projects include, but are not limited to: assimilating market requirements; facilitating access to additional funding; approaching potential public buyers; assess competitive landscape; supporting in innovation management (methodological and process innovation, business model innovation, market innovation); assist in IP management and exploitation; provide guidance for expansion to future markets, etc.

The participation of research and technology organisations should not focus on own technology development but on supporting the small industrial players in accelerating the technology transfer of innovative security solutions for their further development and production.

It is encouraged that one SME takes the coordinator role⁹⁷. Exceptions to this requirement should be duly justified.

The projects should have a maximum estimated duration of 2 years.

This topic contributes to the Strategic Technologies for Europe Platform (STEP⁹⁸) and addresses civil security technologies falling under the sectors of “Digital technologies and deep-tech innovation⁹⁹”. This topic contributes to the objectives stated in the STEP Regulation, i.e., to boost investment in critical technologies in Europe, and, to contribute to reducing or preventing the strategic dependencies of the Union.

HORIZON-CL3-2025-01-SSRI-05: Data repository for security research and innovation

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.

⁹⁷ If a MIDCAP is included in the proposal, it could also take the role of coordinator.

⁹⁸ OJ L, 2024/795, 29.2.2024, ELI: <http://data.europa.eu/eli/reg/2024/795/oj>

⁹⁹ https://strategic-technologies.europa.eu/index_en

<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>

Expected Outcome: Projects' results are expected to contribute to some or all of the following outcomes:

- Accurately gathered, stored, managed and preserved research training and testing data, disaggregated by gender if relevant, which is verified and selected in order to be realistic, up-to-date and sufficient, as well as to make research more trustworthy and reproducible;
- Researchers and projects can further increase the impact and visibility of their work by not just archiving research materials, but also opening them up for reuse and citation by other relevant actors and stakeholders;
- Properly shared and re-used relevant research data can save lives, help develop solutions and maximise the knowledge;
- Enhanced collaboration among relevant research community, improved trust between researchers and practitioners/end-users, facilitated co-operation between different research projects and reduced burden of wasted research or lost results.

Scope: The underlying idea of this topic is to avoid that security and disaster risk research projects obtain and prepare data that at the end of the projects is simply lost instead of being stored and shared for reuse.

In the security domain, due to its specificities, the special categories of data involved or/and unique limitations, which may call for additional requirements, a consolidated, common research database is particularly desired. It is of utmost importance that security practitioners are provided with an increased interoperability and improved (cross-border) exchange of data thanks to harmonised data file formats across Europe, which would easily take into account technological evolutions, i.e., be adaptable in time. Such a lack of realistic, up-to-date and sufficient training and testing data for research purposes and consequently the need for a database, data repository or any other effective and useful tool(s) to gather, manage and store varying security research data, have been regularly raised by the projects working in the area of security. The same is true of data on disaster risk management where national or regional analysis and forecasting databases or national disaster risk assessments can be fragmented or sealed without reasonable open, sustainable access to the wider community.

As a follow up of the outcomes and results of the LAGO project coming from the 2021 data topic: HORIZON-CL3-2021-FCT-01-04: Improved access to fighting crime and terrorism research data, the successful proposal, should subsequently focus on creation and deployment

of a fully functional and operational common research data repository, which will extend to cover other security research areas.

The LAGO project is currently developing the skeleton of how such a repository of R&I data should be created, by providing a detailed roadmap consisting of a clear set of rules, conditions and characteristics that such a consolidated database should have. This LAGO roadmap will provide technical, legal and ethical requirements for a training and testing research data repository mostly in the area of fighting crime and terrorism, but the same project will already take into account possible applications of identified solutions in different security research domains, such as infrastructure resilience, border management or disaster resilience. The LAGO roadmap will also assess if the repository should be centralised or distributed, how to deal with "aging" data, how efficiently projects should exchange data among them taking into account security R&I specificities.

Building on the skeleton of LAGO, the newly developed data repository will enable security community (researchers, practitioners, industry, policy makers) access the scientifically satisfactory amount of up-to-date high quality and realistic data which is or was used to develop reliable (mostly digital and based on AI but also non-digital and not linked with big data) tools, technologies and solutions in support of security research and innovation. This data repository could also be very useful for verification and validation of new innovative security solutions developed under various calls in the most recent Work Programme.

Taking into account the complexity of the future repository, a multi-faceted approach will be needed and the proposal, apart from the roadmap's findings developed by LAGO, should also build on, and not duplicate, LAGO's outcomes regarding the following aspects:

- What exact types of data should be stored in the repository;
- Interoperability with existing operational systems;
- Interoperability/compatibility with European open science cloud (EOSC), with the TESSERA project¹⁰⁰ as well as other potentially relevant architectures and initiatives such as European Data Spaces or GAIA-X;
- How to search for data;
- Data models for security research - Harmonising of data formats;
- Concept of operations for the use of the repository by/during EU-funded security R&I projects, modalities of use, user profiles/schemes, etc.
- Legal issues, avoidance of any bias, accessibility levels related to the sensitivity of various data sets, solutions for annotation as well as for the aging of the data, etc.

¹⁰⁰ TESSERA project: 'Towards the datasets for the European Security Data Space for Innovation'. Internal Security Fund (ISF-2021-TF1-AG-DATA - data sets for the European Data Space for innovation). Duration: 03/2024 - 02/2026 (24 months).

The proposal should carry out extensive testing and evaluation (verification and validation), in close cooperation with ongoing projects, which would access the repository, populate it and use data intensively during the project implementation.

The proposal should develop an exploitation and sustainability plan following up the planning activities of LAGO, including funding instruments to be used for the operationalisation of the repository developed under the project as well as finding possibilities to maintain the repository after the lifetime of the project so that it not only continues to well function but is able to be extended with new data. The data repository will need to grow so it will have to be treated as an ongoing system. Co-ordination with already existing platforms or communities already using another reliable domain-specific data repository/ies for archiving and sharing research data is strongly recommended in order to verify if it would be possible to adhere in the future to a larger system or infrastructure of repositories such as European Open Science Cloud (EOSC) for example and other relevant activities.

Adopting sound security practices, such as developing comprehensive access rules to allow only authorized users with a legitimate need to access, modify, or transmit data, are crucial. Combined with a digital signature approach or multi-factor authentication, access rules go a long way in keeping sensitive data stored in a data repository secure. These and other security measures, such as the anonymisation of personal data, will enable the research community to fully leverage large volumes of data without introducing unnecessary security risks.

The repository developed by the proposal should preserve research data relevant to various security research domains, such as fighting crime and terrorism, infrastructure resilience, border management or disaster resilience across time and help security research community easily find, access and re-use the necessary data. The development and the functioning of the repository will be based on the outcomes of the roadmap from the LAGO project¹⁰¹ from 2021 FCT call project within the remits of Horizon Europe regulation (including ethics). The repository should be operational to be tested for at least one year before the project ends. Data sharing will be based on open science principle of ‘as open as possible, as closed as necessary’. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable). To make data FAIR, the basics of good Research Data Management will have to be applied.

All necessary system features as well as the functioning of the repository should comply with privacy and data protection requirements when handling data, in order to facilitate data management ensuring full access to the data actually needed (in line with the necessity and proportionality principle and in full respect of fundamental rights and applicable legislation).

Projects should take into account, during their lifetime, relevant activities and initiatives for ensuring and improving the quality of scientific software and code, such as those resulting from projects funded under the topic HORIZON-INFRA-2023-EOSC-01-02 on the development of community-based approaches.

¹⁰¹ <https://lago-europe.eu/>

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

The project should have a maximum estimated duration of 3 years.

HORIZON-CL3-2025-01-SSRI-06: Demand-led innovation for civil security through Pre-Commercial Procurement (PCP)

Call: Civil Security for Society	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.50 million.
<i>Type of Action</i>	Pre-commercial Procurement
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <p>This topic requires the participation¹⁰², as beneficiaries, of at least 3 practitioners and 3 public procurers from 3 different EU Member States or Associated Countries. One organisation can have the role of practitioner and public procurer simultaneously, both counting for the overall number of organisations required for eligibility.</p> <p>For participants with practitioner status, applicants must fill in the table “Information about security practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.</p> <p>The specific conditions for actions with PCP/PPI procurements in section H of the General Annexes apply to grants funded under this topic.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B.
<i>Legal and financial set-up of</i>	The rules are described in General Annex G. The following exceptions apply:

¹⁰² see General Annexes p.13-14 on the Consortium Composition as regards Pre-commercial Procurement

<i>the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>PCP/PPI procurement costs are eligible.</p> <p>The specific conditions for actions with PCP/PPI procurements in section H of the General Annexes apply to grants funded under this topic.</p> <p>Beneficiaries must ensure that the subcontracted work is performed in at least 3 Member States — unless otherwise approved by the granting authority.</p>
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Expected Outcome: Projects' results are expected to contribute to the following outcomes:

- A community of EU civil security practitioners with shared needs for innovative technology solutions, supported by an industrial base in particular SMEs and Startups, to access the public procurement market and scale up their business;
- Procurers facilitate the commercialisation of innovative solutions by their successful suppliers through providing them with first customer references for the validation and first pilot deployment;
- Increased opportunities for wide market uptake and economies of scale for the supply side through increased demand for innovative solutions, wide publication of results and where relevant contribution to standardisation, regulation or certification;
- Supporting public procurers, to collectively implement PCPs to drive innovation from the demand side and open up wider commercialisation opportunities for companies in Europe to take or maintain international leadership in new markets that can deliver innovative solutions.

Scope: As past experience shows that pre-commercial procurement opens up the procurement market for startups and enables the public sector to address societal challenges more effectively, public procurers should make more strategic use of PCP. Applicants are invited to submit proposals for PCP action to acquire Research and Development (R&D) services and innovative civil security technology solutions.

Proposals should demonstrate interest from a broader community of potential buyers, beyond the direct beneficiaries, who share similar needs and are open to jointly adopting the solutions developed, provided they are proven mature and operationally viable. The proposals must include an analysis of the state of the art and market landscape, aligning research activities with identified needs and presenting a range of technical alternatives to address the challenge. Furthermore, to stimulate dialogue with the supply side, public procurers are required to organise proposals should demonstrate sustainability of the action beyond the life of the project.

The proposals should build on the outcomes of CSA projects funded under previous work programmes aimed at creating *Stronger grounds for pre-commercial procurement of innovative security technologies*. The proposals should provide clear evidence to justify and de-risk the PCP action, demonstrating that the identified challenge is significant and necessitates a PCP action to mature certain technologies and compare alternatives. It must be shown that a consolidated group of practitioners and procurers with shared needs and requirements is committed to the PCP process, enabling informed decisions on future joint procurement of innovative solutions. Activities covered should include cooperation with policy makers to reinforce the national policy frameworks and mobilise substantial additional national budgets for PCP and innovation procurement in general beyond the scope of the project. The tendering process must be well-defined, supported by a draft plan, and include readiness of documentation and administrative procedures to ensure a compliant launch of the call for R&D services under PCP rules.

Proposals must demonstrate commitment to exploiting project results beyond its conclusion, ensuring engagement with stakeholders and implementation of strategies for future uptake. Applicants should also clarify measures to ensure compliance with the principles of the EU Directive on public procurement, particularly those related to PCP. The required open market consultations should be completed in at least three EU Member States. Prior consultations conducted under previous CSA projects may be used, provided they ensured procurement viability and remain relevant to the current state of the art.

Involvement of procurement decision makers is needed to ensure that end solution(s) are adopted by public buyers, increasing the societal impact of the related research activities. Therefore, procurers should declare in the proposal their interest to pursue deployment of solutions resulting from the PCP in case the PCP delivers successful solutions and indicate whether they will:

1. procure successful solution(s) as part of the PCP.
2. launch a separate follow-up procurement after the PCP to buy such type of solutions.
3. adopt successful solutions without the need to procure them (e.g. in case of open-source solutions).
4. foresee financial or regulatory incentives for others to adopt successful solutions (e.g. in case the final end-users of the solutions are not the procurers but for example citizens).

In these four cases, the procurers can implement the project as a fast-track PCP¹⁰³. In the first case, the procurers must foresee the budget in the proposal to purchase at least one solution during the PCP. In the second case, the procurers should include in the proposal a deliverable that prepares the follow-up procurement to purchase such type of solution(s) after the PCP. In the first and third case, the procurers must foresee sufficient time during the project to deploy and validate that the solutions function well after installation. In the fourth case, the procurers

¹⁰³ see General Annex H of the Horizon Europe Work Programme.

can use financial support to third parties to provide financial incentives to final end-users to adopt the solutions, with a maximum budget of EUR 100.000.

Applicants should propose an implementation of the project that includes:

- A minimal preparation stage dedicated to finalising the tendering documents package for a PCP call for tenders based on the technical input, and to define clear verification and validation procedures, methods and tools for the evaluation of the prototypes to be developed throughout the PCP phases.
- Moreover, to ensure the sustainability and uptake of the developed solutions, proposals should outline clear plans for post-PCP activities. As outlined in the general annexes of the Horizon Europe Work Programme, the topic allows public buyers to use the fast-track PCP option (e.g. 2 instead of 3 phases) when they commit to buying or deploying the resulting solutions after the PCP. However, if such a commitment is not yet in place at the proposal stage, the call requires proposers to include a deliverable outlining concrete activities to prepare the ground for follow-up deployment or procurement after the PCP.
- Launching the call for tenders for research and development services. The call for tenders should envisage a competitive development composed of different phases that would lead to at least 2 prototypes from 2 different providers to be validated in real operational environment at the end of the PCP cycle;
- Conducting the competitive development of the prototypes following the PCP principles including a design phase, an integration and technical verification phase and a validation in real operational environment phase. In evaluating the proposals and the results of the PCP phases, the applicants should consider technical merit, feasibility and commercial potential of proposed research efforts.
- Consolidating the results of the evaluation of the developed prototypes, extracting conclusions and recommendations from the validation process, and defining a strategy for a potential uptake of solutions inspired in the PCP outcomes, including a complete technical specification of the envisaged solutions and standardisation needs and/or proposals. This strategy should consider joint-cross border procurement schemes and exploit synergies with other EU and national non-research funds.

The applicants are expected to maximise the visibility of the project outcomes to the wide community of potential EU public buyers. Liaison with other civil security communities beyond those addressed by the project is encouraged in order to assess the possible reuse and extensibility of the identified solutions to different domains.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

Other actions not subject to calls for proposals

1. External expertise for reviews of projects

This action will support the use of appointed independent experts for the monitoring of actions (grant agreement, grant decision, public procurement actions, financial instruments) funded under Horizon Europe and previous Framework Programmes for Research and Innovation, and where appropriate include ethics checks, as well as compliance checks regarding the Gender Equality Plan eligibility criterion.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative budget: EUR 0.10 million from the 2025 budget

2. Workshops, conferences, experts, communication activities, studies and innovation uptake promotion

- Support to workshops, expert groups, communications activities, or studies. Workshops are planned to be organised on various topics to involve end-users (e.g. the Community for European Research and Innovation for Security); preparation of information and communication materials, etc.
- Organisation of cybersecurity conferences and support to other cybersecurity events; socio-economic studies, impact analysis studies and studies to support the monitoring, evaluation and strategy definition for cybersecurity and digital privacy policy.
- Support to promotion of innovation uptake, including through supporting developing certification testing methodologies for innovative technologies.
- Needs analysis and options for enabling the sharing of security research projects outputs (tools).

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 1.19 million from the 2025 budget

3. Indirectly Managed Action by the ECCC

The Commission intends to conclude a contribution agreement with the European Cybersecurity Competence Centre (ECCC) for the implementation of Horizon Europe cybersecurity actions not co-funded by Member States, in accordance with Article 5(5) of Regulation (EU) 2021/8878. Further to the contribution agreement, the ECCC will launch a call for proposals in accordance with the specifications in the Appendix set out below. These

include topics where participation will be limited in accordance with Article 22(5) of the Horizon Europe Regulation to legal entities established in Member States and Horizon Europe Associated Countries (eligible countries). In addition, for such topics, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, will not be eligible to participate.

The Commission intends to conclude a contribution agreement with the ECCC, in accordance with Article 5(5) of Regulation (EU) 2021/8878. In particular, the contribution agreement will entrust the ECCC with the implementation of a call for proposals according to the specifications in the Appendix set out below.

Legal entities:

European Cybersecurity Competence Centre (ECCC), Polytechnic University of Bucharest, Strada Splaiul Independentei Nr.313, Sector 6, Bucharest 060042, Romania

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 90.55 million from the 2025 budget

APPENDIX – Indirectly managed action by the ECCC

Specifications of the ‘Increased Cybersecurity’ call to be launched by ECCC

Call - Increased Cybersecurity

HORIZON-CL3-2025-02-CS-ECCC

Conditions of the call¹⁰⁴

Proposals are invited against the following topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁰⁵	Indicative number of projects expected to be funded
		2025		

¹⁰⁴ The Executive Director-of the ECCC may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Executive Director of the ECCC may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹⁰⁵ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Horizon Europe - Work Programme 2025
Civil Security for Society

Opening: 12 Jun 2025 (tentative)				
Deadline(s): 12 Nov 2025 (tentative)				
HORIZON-CL3-2025-02-CS-ECCC-01: Generative AI for Cybersecurity applications	RIA	40.00	12.00 to 14.00	3
HORIZON-CL3-2025-02-CS-ECCC-02: New advanced tools and processes for Operational Cybersecurity	IA	23.55	4.50 to 6.00	4
HORIZON-CL3-2025-02-CS-ECCC-03: Privacy Enhancing Technologies	RIA	11.00	3.00 to 4.00	3
HORIZON-CL3-2025-02-CS-ECCC-04: Security evaluations of Post-Quantum Cryptography (PQC) primitives	RIA	4.00	2.00 to 3.00	2
HORIZON-CL3-2025-02-CS-ECCC-05: Security of implementations of Post-Quantum Cryptography algorithms	RIA	6.00	2.00 to 3.00	2
HORIZON-CL3-2025-02-CS-ECCC-06: Integration of Post-Quantum Cryptography (PQC) algorithms into high-level protocols	RIA	6.00	2.00 to 3.00	2
Overall indicative budget		90.55		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General

	Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

HORIZON-CL3-2025-02-ECCC-01: Generative AI for Cybersecurity applications

Call: Increased Cybersecurity	
Specific conditions	
<i>Expected EU contribution per project</i>	It is estimated that an EU contribution of between EUR 12.00 and 14.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, participation in this topic is limited to legal entities established in Member States and Associated Countries.</p> <p>In order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, shall not participate in the action.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering a broad range of research areas, grants will be awarded to applications not only in order of ranking but at least also to the two highest ranked proposal addressing expected outcome a) and the highest ranked proposal addressing expected outcome b), provided that the applications attain all thresholds.</p>
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU

	classified and sensitive information of the General Annexes.
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Expected Impact: Action launched by the ECCC to incorporate ‘expected impact’ language set out in the ‘Destination – Increased Cybersecurity’ section of this work programme part.

Expected Outcome: Projects will develop technologies, tools, processes that reinforce cybersecurity using AI technological components, in particular Generative AI, in line with relevant EU policy, legal and ethical requirements.

Proposals should address at least one of the following expected outcomes:

- a. Developing, training and testing of Generative AI models for monitoring, detection, response and self-healing capabilities in digital processes, and systems against cyberattacks, including adversarial AI attacks.
- b. Development of Generative AI tools and technologies for continuous monitoring, compliance and automated remediation. These should consider legal aspects of EU and national regulation as well as ethical and privacy aspects.

Scope: The use of Artificial intelligence is becoming indispensable with applications where massive data is involved. Understanding all implications for cybersecurity requires deeper analysis and further research and innovation.

Generative AI presents both opportunities and challenges in the field of cybersecurity. This topic supports the research on new opportunities brought by Generative AI for Cybersecurity applications, to develop, train and test AI models to scale up detection of threats and vulnerabilities, enhance response time, cope with the large quantities of data involved, and automate process and decision-making support; for example by generating reports from threat intelligence data, suggesting and writing detection rules, threat hunts, and queries for the Security information and event management (SIEM), creating management, audit and compliance reports and reverse engineering malware.

Proposals addressing expected outcome a)

(a) (i) **Advanced threat and anomaly detection and analysis:** Current cybersecurity tools may struggle to keep pace with the evolving tactics of cyber attackers. Developing, training and testing of Generative AI models can be used to analyse large volumes of data and accurately identify anomalies and deviations from normal patterns of behaviour, enabling more effective threat detection, analysis and response.

Tools should also support cybersecurity professionals as they may struggle to detect and respond to threats posed by generative AI, particularly as these systems become more sophisticated and difficult to distinguish from genuine human activity.

(a) (ii) **Adaptive security measures:** Cybersecurity tools often rely on static rules and signatures to detect threats, making them less effective against new and evolving attack methods. In addition, many cybersecurity tools still rely on manual intervention for threat

response, which can be time-consuming and ineffective. Generative AI, through development, training, finetuning and testing of Generative AI models can support these tools to adapt and respond to emerging threats in real-time, improving overall security posture.

(a) (iii) **Enhanced authentication and access control:** The use of AI technologies could improve resilience of authentication and access control systems to unauthorized access and credential theft, making it more difficult for unauthorized users to gain access to sensitive information or systems.

Proposals addressing expected outcome b)

(b) (i) Development of tools powered by Generative AI that analyse and facilitate the **Application of the national and EU regulation in digital systems**, in particular the Artificial Intelligence Act, the Directive on measures for a high common level of cybersecurity across the Union (NIS2) and the Cyber Resilience Act.

(b) (ii) **Adaptation to a dynamic environment.** Companies, public sector and organisations face an ever-changing environment which makes keeping up with compliance towards cybersecurity rules challenging. On one hand there's a variety of rules applicable at sectorial, national or European level to be considered. On the other, change management and updates in ICT systems in organisations is frequent. Addressing both facets with tools powered with Generative AI brings the potential for a compliance continuum within organisations otherwise limited in time when driven by human intervention only.

All proposals are expected to respect Trustworthy and Responsible AI principles¹⁰⁶ and data privacy.

All proposals should demonstrate the EU added value by fostering the development of EU technology, the use of open-source technologies when technically and economically feasible, the exploitation of available EU data (Data Spaces, EOSC, federated data etc)

Proposals should define key performance indicators (KPI), with baseline targets to measure progress and to demonstrate how the proposed work will bring significant advancement to the state-of-the-art. All technologies and tools developed should be appropriately documented, to support take-up and replicability. Participation of SMEs is encouraged.

Proposals are expected to pay special attention to the Intellectual Property dimension of the results. The usability of the outcomes and results once the project is finished will be closely assessed.

HORIZON-CL3-2025-02-CS-ECCC-02: New advanced tools and processes for Operational Cybersecurity

Call: Increased Cybersecurity

¹⁰⁶ https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/guidelines-responsible-use-generative-ai-research-developed-european-research-area-forum-2024-03-20_en
<https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence>

Specific conditions	
<i>Expected EU contribution per project</i>	It is estimated that an EU contribution of between EUR 4.50 and 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 23.55 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, participation in this topic is limited to legal entities established in Member States and Associated Countries.</p> <p>In order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, shall not participate in the action.</p>
<i>Technology Readiness Level</i>	Tools and technologies developed are expected to start the project at minimum at TRL 4 and achieve at least TRL 7 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025)¹⁰⁷.</p>
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

¹⁰⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Expected Impact: Action launched by the ECCC to incorporate ‘expected impact’ language set out in the ‘Destination – Increased Cybersecurity’ section of this work programme part.

Expected Outcome: The use of and dependence on information and communication technologies have become fundamental aspects in all sectors of the economy. Public administrations, companies and citizens are more interconnected and interdependent across sectors and borders than ever before. This higher uptake of digital technologies increases exposure to cyber security incidents, vulnerabilities and their potential impacts. At the same time, Member States are facing growing cybersecurity risks and an overall complex threat landscape, with a clear risk of rapid spill-over of cyber incidents from one Member State to others.

Moreover, cyber operations are increasingly integrated in hybrid and warfare strategies, with significant effects on the target. In particular, the current geopolitical context is being accompanied by a strategy of hostile cyber operations, which is a game changer for the perception and assessment of the EU’s collective cybersecurity crisis management preparedness and a call for urgent action. The threat of a possible large-scale incident causing significant disruption and damage to critical infrastructure and data spaces demands heightened preparedness at all levels of the EU’s cybersecurity ecosystem. In recent years, the number of cyberattacks has increased dramatically, including supply chain attacks aiming at cyberespionage, ransomware, or disruption. The vulnerability landscape is also threatening. The ENISA Threat Landscape Report 2024¹⁰⁸ counts a total of 19,754 vulnerabilities. This amount of vulnerabilities can’t be manually managed by humans. There is a need for automated management of vulnerabilities based on established standards like the Common Security Advisory Framework (CSAF)¹⁰⁹.

As regards detection of cyber threats and incidents, there is an urgent need to increase the exchange of information and improve our collective capabilities in order to reduce drastically the time needed to detect cyber threats and mitigate, before they can cause large-scale damage and costs. While many cybersecurity threats and incidents have a potential cross-border dimension, due to the interconnection of digital infrastructures, the sharing of relevant information among Member States remains limited. Proposals are expected to address this emerging threat landscape with the development of advanced frameworks, services tools, and processes, in line with relevant EU legislation (NIS2, Cyber Resilience Act, Cyber Solidarity Act).

Lastly, focus should be given to developing innovative frameworks, technologies, tools, processes, and services that reinforce cybersecurity capabilities for operational and technical cybersecurity cooperation, in line with relevant EU policy, with particular focus on NIS2, Cyber Solidarity Act and the EU Cybersecurity Strategy, as well as legal and ethical requirements.

Proposals should address at least two of the following expected outcomes:

¹⁰⁸ The ENISA Threat Landscape Report 2024: ENISA Threat Landscape Report 2024: <https://www.enisa.europa.eu/publications/enisa-threat-landscape-2024>

¹⁰⁹ Common Security Advisory Framework (CSAF): <https://csaf.io/>

- Enhanced Situational Awareness through advanced Cyber Threat Intelligence frameworks, tools, and services as well as cybersecurity risk assessments of critical supply chains made in the EU,
- Frameworks, tools, and services for preparedness against Cyber and Hybrid Threats in information and communication technology (ICT) and operational technology (OT), including cybersecurity exercises,
- Expanded Security Operations Centre/Computer Security Incident Response Teams (SOC/CSIRT) functionality through advanced tools and services for detection, analysis, incident handling including response and reporting as well as remediation,
- Development of testing and experimentation facilities for advanced tools and processes for operational cybersecurity, including the creation of digital twins for critical infrastructures and essential and important entities as defined in NIS2,
- Development and pilot implementation of cross-sector and/or cross-border cyber crisis management frameworks, services, and tools,
- Frameworks, services, and tools aimed at mechanisms and processes for enhanced operational cooperation between public sector entities (CSIRT network, EU-CyCLONe). Extension of the above to essential and important entities as defined in NIS2¹¹⁰, would be an advantage.

Scope: Proposals are expected to demonstrate the developed frameworks, tools, services, and processes through pilot implementations involving the participation of relevant national cybersecurity authorities and/or essential and important entities as defined in NIS2, implemented with the participation of leading European cybersecurity industry. Proposals should consider the impact of forthcoming legislation, in particular the Cyber Resilience Act.

Real world applications and the usability of the solutions developed should feature predominately in the proposals.

The participation of the following types of entities is highly encouraged: innovative European cybersecurity start-ups and SMEs with a proven track-record in cybersecurity innovation at EU level (e.g. active participation in successful EU funded projects including cybersecurity projects under Horizon Europe, Digital Europe Programme cybersecurity projects or EIC Pathfinder or Accelerator projects), European start-ups and SMEs that can demonstrate established operational cooperation with relevant National Cybersecurity Authorities, European start-ups and SMEs that have received equity investments by national, European or private Venture Capital funds for cybersecurity activities etc. The participation of these start-ups and SMEs with an active role in the implementation of the proposed action (project coordination, technical coordination, lead of pilot implementation etc) would be considered an asset.

¹¹⁰ Directive on measures for a high common level of cybersecurity across the Union: <https://eur-lex.europa.eu/eli/dir/2022/2555>

HORIZON-CL3-2025-02-CS-ECCC-03: Privacy Enhancing Technologies

Call: Increased Cybersecurity		
Specific conditions		
<i>Expected contribution per project</i>	<i>EU per</i>	It is estimated that an EU contribution of between EUR 3.00 and 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>		The total indicative budget for the topic is EUR 11.00 million.
<i>Eligibility conditions</i>		The conditions are described in General Annex B. The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Type of Action</i>		Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>		The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹¹¹ .
<i>Security Sensitive Topics</i>		Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Impact: Action launched by the ECCC to incorporate ‘expected impact’ language set out in the ‘Destination – Increased Cybersecurity’ section of this work programme part

Expected Outcome: Projects’ results are expected to contribute to some or all of the following outcomes:

- Development of robust, scalable, and reliable technologies to uphold privacy within federated and secure data sharing frameworks, as well as in the processing of personal and industrial data, integrated into real-world systems.

¹¹¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Development of privacy preserving approaches for data sharing solutions, including privacy-preserving cyber threat information sharing, and in collaborative computations involving sensitive data.
- Integration of privacy-by-design at the core of software and protocol development processes, with attention to ensure that cryptographic building blocks and implementations of privacy-enhancing digital signatures and user-authentication schemes are crypto-agile and modular, to facilitate a transition towards post-quantum cryptographic algorithms.
- Development of privacy enhancing technologies for the users of constrained devices.
- Contribution towards the advancement of GDPR-compliant European data spaces for digital services and research, such as those on health data, aligning with DATA Topics of Horizon Europe Cluster 4.
- Development of privacy enhancing technologies and solutions, to benefit the requirements of citizens and companies, including small and medium-sized enterprises (SMEs).
- Development of blockchain-based and decentralized privacy-enhancing technologies, to preserve data confidentiality, integrity, and the authenticity of transactions and digital assets. Possible combination of blockchain with other technologies, such as federated learning, will need to address the data's security and privacy shared through such networks while ensuring that their connected devices are trusted.
- Investigating the usability and user experience of privacy-enhancing technologies and exploring ways to design systems that are both secure and user-friendly.

Scope: Protecting individuals' personal data and ensuring privacy while allowing for data processing and analysis is fundamental for our society. Privacy-preserving techniques allow to minimize the amount of personal data collected and processed, and to protect that data through advanced cryptographic methods. For instance, machine-learning methodologies are leveraged to dissect medical and behavioural data, aiming to unearth causations and insights into cyber attacks or threats. However, a substantial portion of this data comprises personal information, (such as sensitive health data), raising concerns over potential breaches or misuse, thus jeopardizing the privacy of individuals, societal well-being, and economic stability.

In addition, the challenges related to the exploitation of non-personal/industrial data assets, which could impede the full realization of the data-driven economy, are also subject to the work that can be proposed under this topic. Solutions that can provide security against quantum adversaries are also encouraged.

Privacy-enhancing technologies (PETs) such as cryptographic anonymous credentials, differential privacy, secure multiparty computation, homomorphic encryption, advanced digital signatures, such as ring signatures, blind signatures and attribute-based credentials hold

promise in mitigating these challenges, yet their practical application necessitates further refinement and rigorous testing. Consortia are encouraged to propose solutions that can improve the usability and effectiveness of different PETs in realistic environment and to investigate their integration within common European data spaces. The inclusion of agile schemes designed in a modular way to support the transition to post-quantum PETs and the design, improvement and security analysis of quantum-resistant PETs is welcome, in light of the advances of quantum technologies.

Proposals should also focus on enhancing the usability, scalability, and dependability of secure and PETs within supply chains, while seamlessly integrating with existing infrastructures and conventional security protocols. They should also accommodate the diversity in data types and models across various organizations, undergoing validation and pilot runs within authentic data environments. Adherence to data regulations, notably GDPR, is paramount.

Consortia should seek to intertwine interdisciplinary expertise and resources from industry stakeholders, service providers, and end-users. The engagement of SMEs is encouraged, alongside the inclusion of legal proficiency to ensure regulatory compliance, including GDPR adherence. Furthermore, proactive identification and assessment of potential regulatory hurdles and constraints for the developed technologies/solutions are strongly encouraged.

HORIZON-CL3-2025-02-CS-ECCC-04: Security evaluations of Post-Quantum Cryptography (PQC) primitives

Call: Increased Cybersecurity		
Specific conditions		
<i>Expected contribution per project</i>	<i>EU per</i>	It is estimated that an EU contribution of between EUR 2.00 and 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>		The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>		Research and Innovation Actions
<i>Eligibility conditions</i>		<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, participation in this topic is limited to legal entities established in Member States and Associated Countries and OECD countries.</p> <p>In order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-</p>

	eligible country or by a non-eligible country entity, shall not participate in the action.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹¹² .
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Impact: Action launched by the ECCC to incorporate ‘expected impact’ language set out in the ‘Destination – Increased Cybersecurity’ section of this work programme part

Expected Outcome: Projects’ results are expected to contribute to some or all of the following outcomes:

- Breakthroughs in understanding the quantum hardness of various mathematical problem classes that underpin the security of current and future post-quantum cryptosystems;
- New quantum algorithms with significant quantum speed-up for lattice-based, code-based, and potentially other mathematical problem-classes;
- Improved implementation of quantum algorithms using high-level quantum programming languages to solve mathematical problems forming the core of cryptosystems;
- Establishment of environments testing the robustness of cryptosystems regarding quantum attackers;
- AI-based approaches to help discovering vulnerabilities of lattice-based or other mathematical problem-classes;
- Cryptanalysis results;

¹¹² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Parameter suggestions to create a robust set of cryptographic building blocks for post-quantum cybersecurity and design of post-quantum cryptosystems with improved security against quantum or AI-based attacks.

Scope: The intrinsic security of PQC algorithms is based on mathematical problems that are believed to be intractable for both classical and quantum computers. To assess the quantum security of post-quantum primitives is fundamental in order to boost our confidence on post-quantum cryptosystems. The development of quantum algorithms demonstrating a significant quantum speed-up would represent a major breakthrough, necessitating a reassessment of the security of cryptosystems (lattice-based, code-based, and others). Conversely, if no significant quantum speed-up is discovered, it would bolster our confidence in the security of these post-quantum cryptosystems, though some parameters may still require fine-tuning. Moreover, up to now existing quantum attackers have been analyzed mostly in a theoretical way. However, their application to nowadays cryptosystems fail due to a lack of efficient implementations and hardware. Studies are also needed on AI-based approaches that may be used to attack certain schemes with certain implementation choices, and the discovery of eventual vulnerabilities can help the research community develop more robust post-quantum cryptosystems.

Proposals on the assessment of the security of post-quantum primitives, via studies focused on eventual quantum algorithms with demonstrable speed-up, eventually also in combination with AI, or on solely AI-based approaches, are welcome. The security of lattice and code-based PQC algorithms may be prioritized, but tackling other mathematical problem classes is not excluded. As the unprecedented computational power of quantum computing can greatly enhance AI capabilities, combination of different approaches may also be considered. Consortia with team of applicants with background in post-quantum cryptography and in quantum computing are particularly encouraged. Projects should lead to identification of vulnerabilities of current post-quantum cryptographic building blocks and to practical recommendations for parameters for the design of post-quantum cryptosystems with improved security against quantum attacks and future advances in code-breaking and AI.

HORIZON-CL3-2025-02-CS-ECCC-05: Security of implementations of Post-Quantum Cryptography algorithms

Call: Increased Cybersecurity		
Specific conditions		
<i>Expected contribution per project</i>	<i>EU per</i>	It is estimated that an EU contribution of between EUR 2.00 and 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>		The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>		Research and Innovation Actions

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, participation in this topic is limited to legal entities established in Member States and Associated Countries and OECD countries.</p> <p>In order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, shall not participate in the action.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025)¹¹³.</p>
<i>Security Sensitive Topics</i>	<p>Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.</p>

Expected Impact: Action launched by the ECCC to incorporate 'expected impact' language set out in the 'Destination – Increased Cybersecurity' section of this work programme part

Expected Outcome: Projects' results are expected to contribute to some or all of the following outcomes:

- Design and implementations of Post-Quantum Cryptography (PQC) algorithms that are resistant to side-channel and fault attacks;
- Optimized countermeasures taking into account a balanced trade-off between security, performance, and costs;
- Recommendations on implementing countermeasures for a broad range of attacks, also identifying the available and necessary hardware;

¹¹³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Analysis of new attacks or combinations of attacks, also eventually enhanced by AI, applicable to real-world conditions.
- Design of automated security evaluations for PQC implementations.

Scope: The security of the implementations of PQC algorithms is vital for maintaining the confidentiality, integrity, authenticity and availability of digital information and communications in the face of implementation attacks, such as, for example, side-channel attacks using information from timing, power consumption, electromagnetic radiation, fault attacks disturbing the secure operation of the device and their combination. Such attacks, eventually also enhanced by the use of deep learning, constitute significant threats to both (embedded and regular) software and hardware implementations. In various application areas such as IoT, cloud-based applications, automotive, measures to prevent such attacks currently lead to substantial resource overhead due to the complexity of the algorithms, and the security remains unclear given the limited exploration of different attack surfaces. Countermeasures, to the extent that they are available, may have significant impact on run-time and memory consumption. Resistance in PQC implementations to implementation attacks is an increasingly common concern among customers, especially when exploring the right balance between security and performance.

Evaluating the security of PQC algorithm implementations against side-channel and fault attacks is crucial, given the proven vulnerabilities. Various countermeasures, such as masking, shuffling, randomized clocking, random delay insertion, constant weight encoding, code polymorphism, control-flow integrity and re-computation of critical operations can be employed to mitigate these attacks. Synergies between specific countermeasures and the design of cryptographic systems are available for pre-quantum cryptography but require investigation for post-quantum cryptography.

Proposals are welcome on developing solutions that protect against such implementation attacks, at reasonable costs and minimizing the loss of performance while maintaining the required security, as well as on the analysis of new attacks or combinations of attacks, also powered by the use of AI, for security-by-design approaches when designing Post Quantum Cryptographic systems. Activities can also lead to the development of testing methodologies and frameworks for automated security evaluations for correctness and resistance to remote side-channel attacks for regular software and for correctness and resistance to a broad range of implementation attacks for embedded software and hardware.

HORIZON-CL3-2025-02-CS-ECCC-06: Integration of Post-Quantum Cryptography (PQC) algorithms into high-level protocols

Call: Increased Cybersecurity		
Specific conditions		
<i>Expected contribution</i>	<i>EU per</i>	It is estimated that an EU contribution of between EUR 2.00 and 3.00 million would allow these outcomes to be addressed appropriately.

<i>project</i>	Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, participation in this topic is limited to legal entities established in Member States and Associated Countries and OECD countries.</p> <p>In order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, shall not participate in the action.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025)¹¹⁴.</p>
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Impact: Action launched by the ECCC to incorporate ‘expected impact’ language set out in the ‘Destination – Increased Cybersecurity’ section of this work programme part

Expected Outcome: Proposals are expected to contribute to some or all of the following outcomes:

¹¹⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Design and implementations of at least one high-level post-quantum cryptography protocol along with a security analysis demonstrating that no security is lost compared to the used building blocks/lower-level protocols (KEMs, signatures, AEAD,...);
- Submission of these high-level protocols integrating PQC to standardization bodies and/or submission of the specification and implementation to the respective open source projects;
- Requirements analysis highlighting roadblocks and needs for development of PQC solutions for missing building blocks for migrating high-level protocols to PQC.

Scope: The transition to post-quantum cryptography requires changing the uses of most currently deployed public-key cryptography (RSA and ECC). Research and development efforts are providing signature systems and key-exchange mechanisms that are generally accepted to withstand attacks using classical and quantum computers. Efforts are on the way to include these in core Internet protocols such as Transport Layer Security (TLS). While this is an important development, many more protocols need to be modified to be quantum-ready and to ensure backward compatibility with legacy systems. Various application areas, such as Internet of Things, cloud-based applications, and automotive, place constraints on bandwidth or processing time which may prompt different choices than those employed for TLS. Currently used high-level protocols may have components that are specific to Elliptic Curve Cryptography (ECC) or to Rivest-Shamir-Adleman (RSA) or may require additional building blocks next to or in place of signatures and key-exchange mechanisms. While applications that provide authenticity are less urgent to migrate than those for confidentiality, those using embedded hardware such as secure elements, Two-Factor Authentication (2FA) and Multi-Factor Authentication (MFA) using hardware tokens and others have a very slow turnover and need to be replaced by the time large quantum computers exist, thus requiring migrating the design in the near future.

Activities should target one or multiple relevant high-level protocols and produce their post-quantum versions. Typically, this can be achieved through combining current and post-quantum solutions for backward compatibility. Atypical solutions with equivalent security are also welcome. Consortia composed by actors of different nature, such as, for example, research institutions, relevant public entities, and industry to ensure that PQC solutions meet real-world security demands and are robustly tested across various applications are also welcome.

Budget^{115 116}

	Budget line(s)	2025 Budget (EUR million)
Calls		
HORIZON-CL3-2025-01		156.00
	<i>from 01.020230</i>	<i>156.00</i>
Other actions		
Expert contract action		0.10
	<i>from 01.020230</i>	<i>0.10</i>
Public procurement		1.19
	<i>from 01.020230</i>	<i>1.19</i>
Indirectly managed action		90.55
	<i>from 01.020230</i>	<i>90.55</i>
Estimated total budget		247.83

¹¹⁵ The budget figures given in this table are rounded to two decimal places.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹¹⁶ The contribution from Cluster 3 for the year 2025 is EUR 11.51 million for the Missions work programme part and EUR 2.10 million for the New European Bauhaus Facility work programme part.

EN

Horizon Europe
Work Programme 2025

7. Digital, Industry and Space

IMPORTANT NOTICE:

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

This draft is made public before the adoption of the work programme to provide potential participants with the currently expected main lines of this work programme. Only the adopted work programme will have legal value.

The adoption of the work programme will be announced on the Horizon Europe website and on the Funding and Tenders Portal.

Information and topic descriptions indicated in this draft may not appear in the final work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

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Introduction

Progress in digital and industrial technologies, including in space, shapes all sectors of the economy and society. These technologies transform the way industry develops, create new products and services, and are central to any sustainable future. Research and innovation to support the green and digital transition, and attain and maintain strategic capacities such as Access to Space or Act in Space, are a key to Europe's competitiveness and open strategic autonomy, to industrial sustainability and to setting human-centred standards.

Resilience and technological sovereignty have become renewed priorities for the EU due to the current geopolitical and economic context that exposed vulnerabilities in critical value chains. In this context it is imperative to contribute to the implementation of the **Net-Zero Industry Act** (NZIA) and the **Critical Raw Materials Act** (CRMA); and to reinforce Europe's position in digital technologies, high-performance computing, Artificial Intelligence, robotics, secure communication, virtual worlds, critical Space technologies, advanced and sustainable manufacturing technologies, net-zero industry, sustainable raw and innovative materials, and the circular economy.

Cluster 4, 'Digital, Industry and Space' aims to shape competitive and trusted technologies for EU leadership in these technologies; to enable production and consumption respecting the boundaries of our planet; and to maximise the benefits for all parts of society in the variety of social, economic and territorial contexts in Europe. It will for example boost Europe leadership and competitiveness on Artificial Intelligence innovation (AI), leading the way on making AI safer and more trustworthy, and on tackling the risks stemming from its misuse. Similarly, it will ease the exploitation of untapped data potential while promoting high standards of data protection.

This cluster will serve the goals of the **Competitiveness Compass** through substantial R&I investments, often complemented by private investments through partnerships, across different technology readiness levels; and by integrating technological, environmental and social objectives into innovation.

This cluster will also support the **Clean Industrial Deal**, by driving decarbonisation and circularity in the manufacturing, energy-intensive and construction industries; and by providing the advanced materials and advanced manufacturing technologies that are needed for a net-zero economy. It aims to position the European Union as a technology and industrial leader in clean technologies.

Actions under this cluster will support key enabling technologies that are strategically important for Europe's future, and deliver on the following six expected impacts in the Strategic Plan, through matching destinations in this Work Programme.

In addition, several actions are crucial to support our European Economic Security Strategy, notably its 'promote' pillar that focuses on enhancing the Union's competitiveness and

industrial base, as well as investing in research and innovation for strategic and dual-use technologies.

Destination ‘Achieving global leadership in climate-neutral, circular and digitised industrial and digital value chains’

Destination ‘Achieving technological leadership for Europe's open strategic autonomy in raw materials, chemicals and innovative materials’

Destination ‘Developing an agile and secure single market and infrastructure for data-services and trustworthy artificial intelligence services’

Destination ‘Achieving open strategic autonomy in digital and emerging enabling technologies’

Destination ‘Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services in Space and on Ground, Applications and Data’

Destination ‘Digital and industrial technologies driving human-centric innovation’

Calls

Call - INDUSTRY

HORIZON-CL4-2025-01

Overview of this call¹

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)		Expected EU contribution per project (EUR million) ²	Indicative number of projects expected to be funded
		2025	2027		
Opening: 22 May 2025 Deadline(s): 23 Sep 2025					
Destination 1: Achieving global leadership in climate-neutral, circular and digitised industrial and digital value chains					
HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-01: Integrated approaches for remanufacturing (Made in Europe Partnership) (IA)	IA	35.00		5.00 to 7.00	6
HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-02: Physical and cognitive augmentation in advanced manufacturing (Made in Europe Partnership) (RIA)	RIA	35.00		4.00 to 6.00	7
HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-05: Advanced manufacturing technologies for leadership of EU manufacturers in products for the net-zero industry (Made in Europe Partnership) (IA)	IA	42.00		5.00 to 7.00	6

¹

² Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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Partnership) (IA)					
HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-31: From heat-driven processes to the use of mechanical and electric forces (Processes4Planet partnership) (IA)	IA	25.00		8.00 to 10.00	3
HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-32: Green and resilient flexible production processes (Processes4Planet partnership) (IA)	IA	25.00		8.00 to 10.00	3
HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-33: Integrated use of renewable energy carriers in industrial sites (Processes4Planet partnership) (RIA)	RIA	25.00		6.00 to 8.00	3
HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-34: Smart integration of net zero technologies into Energy Intensive industries (Processes4Planet and Made in Europe partnerships) (IA)	IA	25.00		5.00 to 9.00	3
HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-37: Solving issues in carbon-neutral iron and steel making processes with diverse input materials of varying quality (Clean Steel Partnership) (RIA)	RIA	28.00		Around 14.00	2
HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-36: Safe and clean processing technologies and products (Processes4Planet partnership) (RIA)	RIA	24.00		6.00 to 8.00	4
HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-38: Synergies and mutual learning with national and regional initiatives in Europe on Industrial decarbonisation	CSA	1.00		Around 1.00	1

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(CSA)					
HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-39: Towards human-centric, sustainable and resilient energy-intensive industries (Processes4Planet and Clean Steel partnerships) (CSA)	CSA	2.00		Around 2.00	1
Destination 2: Achieving technological leadership for Europe's open strategic autonomy in raw materials, chemicals and innovative materials					
HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-61: Technologies for critical raw materials and strategic raw materials from end-of-life products (IA)	IA	24.00		Around 8.00	3
HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-62: Strategic Partnerships for Raw Materials: Innovative Approaches for sustainable production of Critical Raw Materials (IA)	IA	30.00		Around 7.50	4
HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-63: Innovative solutions for the sustainable production for Semiconductor raw materials (IA)	IA	24.00		Around 8.00	3
HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-64: EU Co-funded Partnership on raw materials for the green and digital transition (Co-funded partnership Raw Materials for the Green and Digital Transition)	COFUND	45.00	45.00	Around 90.00	1
HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-44: Innovative Advanced Materials Innovation Procurement (CSA)	CSA	2.00		Around 2.00	1
HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-45: Materials Commons for Europe (IA)	IA	28.00		Around 28.00	1

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HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-52: Accelerate the uptake of life-cycle assessment (LCA) for Safe and Sustainable by Design (SSbD) chemicals and materials and resulting products (RIA)	RIA	15.00		4.00 to 5.00	3
HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-31: Digitally enabled local-for-local textile and apparel production (Textiles for the Future Partnership) (IA)	IA	10.00		Around 5.00	2
Destination 4: Achieving open strategic autonomy in digital and emerging enabling technologies					
HORIZON-CL4-INDUSTRY-2025-01-DIGITAL-61: AI Foundation models in science (GenAI4EU) (RIA)	RIA	30.00 ³		Around 6.00	5
HORIZON-CL4-INDUSTRY-2025-01-DIGITAL-62: Facilitated cooperation for AI in Science (CSA)	CSA	3.00		Around 3.00	1
Destination 6: Digital and industrial technologies driving human-centric innovation					
HORIZON-CL4-INDUSTRY-2025-01-HUMAN-60: Horizon Standardisation Booster (CSA)	CSA	1.50		Around 1.50	1
HORIZON-CL4-INDUSTRY-2025-01-HUMAN-61: Standardisation landscape analyses tool (CSA)	CSA	1.00		Around 1.00	1
HORIZON-CL4-INDUSTRY-2025-01-HUMAN-62: Artificial Intelligence for knowledge valorisation (CSA)	CSA	2.00		Around 2.00	1
HORIZON-CL4-INDUSTRY-2025-01-HUMAN-63: Value creation pilots for scaling up innovative	CSA	2.00		Around 2.00	1

³ Of which EUR 12.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 6.00 million from the 'Climate, Energy and Mobility' budget.

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solutions (CSA)					
HORIZON-CL4-INDUSTRY-2025-01-HUMAN-64: Pilot initiatives on Technology Infrastructures (CSA)	CSA	5.00		0.50 to 1.00	5
HORIZON-CL4-INDUSTRY-2025-01-HUMAN-65: System innovation experimentation for Industry 5.0 (IA)	IA	3.00		Around 3.00	1
HORIZON-CL4-INDUSTRY-2025-01-HUMAN-66: Assessment of Technology Infrastructure needs in Ukraine (CSA)	CSA	1.50		1.00 to 1.50	1
Overall indicative budget		494.00	45.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - SPACE-HADEA

HORIZON-CL4-2025-02

Overview of this call⁴

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁵	Indicative number of projects expected to be funded
		2025		
Opening: 22 May 2025 Deadline(s): 25 Sep 2025				
Destination 5: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data				
HORIZON-CL4-2025-02-SPACE-11: CSA on access to European spaceports	CSA	1.00	Around 1.00	1
HORIZON-CL4-2025-02-SPACE-12: Digital solutions for autonomy for space transportation systems, design and simulation tools - Digital enablers and building blocks	RIA	3.00	1.00 to 3.00	2
HORIZON-CL4-2025-02-SPACE-13: Digital solutions for autonomy for space transportation systems, design and simulation tools – targeting demonstration	IA	7.00	4.00 to 7.00	2
HORIZON-CL4-2025-02-SPACE-21: ISOS Pilot Mission Detailed Design – Servicing component	RIA	18.00	6.00 to 12.00	2
HORIZON-CL4-2025-02-SPACE-22: ISOS Pilot Mission Detailed Design – HOST component	RIA	17.50	12.00 to 17.50	1
HORIZON-CL4-2025-02-SPACE-23: ISOS	RIA	12.00	10.00 to	1

⁴ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁵ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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Pilot Mission Detailed Design – Logistics component			12.00	
HORIZON-CL4-2025-02-SPACE-24: ISOS Pilot Mission Detailed Design – satAPPs component	RIA	5.00	2.00 to 3.00	2
HORIZON-CL4-2025-02-SPACE-31: Digital enablers and building blocks for Earth Observation and Satellite telecommunication for Space solutions	RIA	6.00	1.00 to 5.00	3
HORIZON-CL4-2025-02-SPACE-32: Preparing demonstration missions for collaborative Earth Observation and Satellite telecommunication for Space solutions	IA	11.00	2.00 to 6.00	3
HORIZON-CL4-2025-02-SPACE-41: Copernicus Climate Change Service (C3S) evolution: new and innovative processing and methods for future Sentinels and other satellites for reanalyses	RIA	10.00	Around 10.00	1
HORIZON-CL4-2025-02-SPACE-42: Copernicus Atmosphere Monitoring Service (CAMS) evolution: improved soil-vegetation-atmosphere modelling and data assimilation of atmospheric constituents	RIA	3.00	Around 3.00	1
HORIZON-CL4-2025-02-SPACE-43: Copernicus Anthropogenic CO ₂ Emissions Monitoring & Verification Support (CO2MVS) capacity: new and innovative methods to estimate the impact of fires on vegetation and related carbon fluxes	RIA	3.00	Around 3.00	1
HORIZON-CL4-2025-02-SPACE-44: Copernicus Marine Environment Monitoring Service (CMEMS) evolution: new and innovative ocean data assimilation techniques	RIA	5.00	Around 5.00	1
HORIZON-CL4-2025-02-SPACE-45: Supporting the AI/ML digital transition of Copernicus Services	RIA	12.00	Around 12.00	1

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HORIZON-CL4-2025-02-SPACE-46: Innovative Earth observation services in support of maritime litter detection and ship source pollution policies	IA	5.00 ⁶	Around 5.00	1
HORIZON-CL4-2025-02-SPACE-71: Space Critical EEE Components for EU non-dependence – RISC-V Microprocessor on 7nm	RIA	5.00	4.50 to 5.00	1
HORIZON-CL4-2025-02-SPACE-72: Space Critical Equipment and Related Technologies for EU non-dependence – Chip Scale Atomic Clocks and Solar Cells	RIA	8.00	3.50 to 4.00	2
HORIZON-CL4-2025-02-SPACE-73: Space Critical EEE Components for EU non-dependence - Connectors	RIA	1.00	0.80 to 1.00	1
HORIZON-CL4-2025-02-SPACE-74: Space Critical EEE Components for EU non-dependence – Advanced Packages and Memories	RIA	6.00	2.50 to 3.00	2
HORIZON-CL4-2025-02-SPACE-81: EU-Japan cooperation on the exploitation of Quantum Space Gravimetry data	RIA	0.50	0.45 to 0.50	1
Overall indicative budget		139.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.

⁶ Of which EUR 5.00 million from the 'Climate, Energy and Mobility' budget.

<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - DIGITAL - CNECT

HORIZON-CL4-2025-03

Overview of this call⁷

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁸	Indicative number of projects expected to be funded
		2025		
Opening: 10 Jun 2025 Deadline(s): 02 Oct 2025				
Destination 2: Achieving technological leadership for Europe's open strategic autonomy in raw materials, chemicals and innovative materials				
HORIZON-CL4-2025-03-MATERIALS-46: Innovative Advanced Materials (IAMs) for photonics, enabling low-power and ultra-broadband performance for telecommunication (RIA) (Innovative Advanced Materials for Europe partnership)	RIA	10.00	Around 5.00	2
HORIZON-CL4-2025-03-MATERIALS-47: Innovative Advanced Materials (IAMs) for conformable, flexible or stretchable electronics (RIA) (Innovative Advanced Materials for	RIA	15.00	Around 5.00	3

⁷ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁸ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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Europe partnership)				
Destination 3: Developing an agile and secure single market and infrastructure for data-services and trustworthy artificial intelligence services				
HORIZON-CL4-2025-03-DATA-08: Large-scale pilots for supply end-to-end infrastructures integrating device, network computing and communication capabilities for Telco Edge Cloud deployments, as a basis for Connected Collaborative Computing Networks (3C networks) (RIA)	RIA	75.00	Around 75.00	1
HORIZON-CL4-2025-03-DATA-09: Alignment of stakeholders towards the supply-side large-scale pilot of end-to-end infrastructures integrating device, network computing and communication capabilities (CSA)	CSA	2.50	1.80 to 2.50	1
HORIZON-CL4-2025-03-DATA-10: Roadmap for next generation computing technologies from IoT device level to edge to cloud to HPC (CSA)	CSA	2.50	1.80 to 2.50	1
HORIZON-CL4-2025-03-DATA-11: Open Internet Stack: development of technological commons/open-source 3C building blocks (RIA)	RIA	10.00	Around 10.00	1
HORIZON-CL4-2025-03-DATA-12: Preparing the Advancement of the state of the art of submarine cable infrastructures (CSA)	CSA	2.10	1.90 to 2.10	1
HORIZON-CL4-2025-03-DATA-13: Fostering Innovative and Compliant Data Ecosystems (IA) (AI, Data and Robotics Partnership)	IA	45.00	7.00 to 9.00	6
Destination 4: Achieving open strategic autonomy in digital and emerging enabling technologies				
HORIZON-CL4-2025-03-DIGITAL-EMERGING-01: Continuation of the Quantum Technologies Flagship (CSA)	CSA	4.50	Around 4.50	1
HORIZON-CL4-2025-03-DIGITAL-EMERGING-02: Quantum Computing –	RIA	10.00	Around 5.00	2

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complementing the quantum computing FPAs with the development of a technology agnostic software stack (RIA)				
HORIZON-CL4-2025-03-DIGITAL-EMERGING-03: Supporting Digital Partnerships in Quantum technologies (RIA)	RIA	8.00	2.50 to 2.70	3
HORIZON-CL4-2025-03-DIGITAL-EMERGING-04: Post-exascale HPC (CSA)	CSA	2.50	Around 2.50	1
HORIZON-CL4-2025-03-DIGITAL-EMERGING-08: Strengthening the fabless Start-up and SME ecosystem in Europe (CSA)	CSA	1.00	Around 1.00	1
HORIZON-CL4-2025-03-DIGITAL-EMERGING-07: Robust and trustworthy GenerativeAI for Robotics and industrial automation (RIA) (AI/Data/Robotics & Made in Europe Partnerships)	RIA	85.00	40.00 to 45.00	2
HORIZON-CL4-2025-03-DIGITAL-EMERGING-09: Challenge-Driven GenAI4EU Booster (RIA) (AI/Data/Robotics Partnership)	RIA	45.00	Around 15.00	3
Destination 6: Digital and industrial technologies driving human-centric innovation				
HORIZON-CL4-2025-03-HUMAN-14: Core technologies for virtual worlds (RIA) (Virtual Worlds and Photonics Partnerships)	RIA	43.00	5.00 to 6.00	7
HORIZON-CL4-2025-03-HUMAN-15: GenAI4EU: Generative AI for Virtual Worlds: Advanced technologies for better performance and hyper personalised and immersive experience (IA) (AI/Data/Robotics & Virtual Worlds Partnerships)	IA	20.00	4.00 to 5.00	5
HORIZON-CL4-2025-03-HUMAN-16: Drive the evolution of the internet towards open and interoperable Web 4.0 and Virtual Worlds: building blocks in priority areas (RIA) (Virtual Worlds Partnership)	RIA	14.50	1.00 to 3.00	9
HORIZON-CL4-2025-03-HUMAN-17: Specific support for the Virtual Worlds	CSA	2.50	Around 2.50	1

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Partnership and the Web 4.0 initiative (CSA) (Virtual Worlds Partnership)				
HORIZON-CL4-2025-03-HUMAN-18: GenAI4EU central Hub (CSA) (AI/Data/Robotics Partnership)	CSA	3.00	Around 3.00	1
HORIZON-CL4-2025-03-HUMAN-19: International cooperation in semiconductors (CSA)	CSA	3.00	Around 3.00	1
Overall indicative budget		404.10		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - DIGITAL - HADEA

HORIZON-CL4-2025-04

Overview of this call⁹

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁰	Indicative number of projects expected to be funded
		2025		
Opening: 10 Jun 2025 Deadline(s): 02 Oct 2025				
Destination 3: Developing an agile and secure single market and infrastructure for data-services and trustworthy artificial intelligence services				
HORIZON-CL4-2025-04-DATA-02: Empowering AI/generative AI along the Cognitive Computing continuum (RIA) (AI/Data/Robotics Partnership)	RIA	30.00	6.00 to 8.00	4
HORIZON-CL4-2025-04-DATA-03: Software Engineering for AI and generative AI (RIA) (AI/Data/Robotics Partnership)	RIA	15.00	4.00 to 6.00	3
Destination 4: Achieving open strategic autonomy in digital and emerging enabling technologies				
HORIZON-CL4-2025-04-DIGITAL-EMERGING-01: Advanced sensor technologies and multimodal sensor integration for multiple application domains (IA) (Photonics Partnership)	IA	25.00	4.00 to 6.00	5
HORIZON-CL4-2025-04-DIGITAL-EMERGING-04: Assessment methodologies for General Purpose AI capabilities and risks	RIA	7.00	3.00 to 4.00	2

⁹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹⁰ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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(RIA) (AI/Data/Robotics Partnership)				
HORIZON-CL4-2025-04-DIGITAL-EMERGING-05: Soft Robotics for Advanced physical capabilities (IA) (AI/Data/Robotics Partnership)	IA	20.00	Around 10.00	2
HORIZON-CL4-2025-04-DIGITAL-EMERGING-07: Enhanced Learning Strategies for General Purpose AI: Advancing GenAI4EU (RIA) (AI/Data/Robotics Partnership)	RIA	30.00	Around 15.00	2
Destination 6: Digital and industrial technologies driving human-centric innovation				
HORIZON-CL4-2025-04-HUMAN-08: GenAI for Africa	RIA	5.00	1.00 to 2.00	2
Overall indicative budget		132.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - INDUSTRY two-stage

HORIZON-CL4-2025-05-two-stage

Overview of this call¹¹

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹²	Indicative number of projects expected to be funded
		2025		
Opening: 22 May 2025				
Deadline(s): 23 Sep 2025 (First Stage), 14 Apr 2026 (Second Stage)				
Destination 1: Achieving global leadership in climate-neutral, circular and digitised industrial and digital value chains				
HORIZON-CL4-2025-05-TWIN-TRANSITION-11-two-stage: Enhanced logistics and operations of construction sites (IA)	IA	13.00	Around 6.50	2
HORIZON-CL4-2025-05-TWIN-TRANSITION-35-two-stage: Developing and embedding upcycling technologies into viable business (Processes4Planet partnership) (IA)	IA	48.00	8.00 to 12.00	5
HORIZON-CL4-2025-05-TWIN-TRANSITION-21-two-stage: Demonstrators for clusters of social circular enterprises (IA)	IA	10.00	Around 5.00	2
Destination 2: Achieving technological leadership for Europe's open strategic autonomy in raw materials, chemicals and innovative materials				
HORIZON-CL4-2025-05-MATERIALS-42-two-stage: Innovative Advanced Materials (IAMs) for product monitoring, smart maintenance and repair strategies in the construction sector (RIA) (Innovative	RIA	30.00	Around 6.00	5

¹¹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹² Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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Advanced Materials for Europe partnership)				
HORIZON-CL4-2025-05-MATERIALS-43-two-stage: Innovative Advanced Materials (IAMs) for robust, fast curing sealants and coatings for manufacturing and final assembly (IA) (Innovative Advanced Materials for Europe partnership)	IA	30.00	Around 6.00	5
HORIZON-CL4-2025-05-MATERIALS-51-two-stage: Development of safe and sustainable by design alternatives to Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) (IA)	IA	30.00	Around 7.00	4
Overall indicative budget		161.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Destinations

Destination 1: Achieving global leadership in climate-neutral, circular and digitised industrial and digital value chains

The research and innovation under this Destination will continue to support a globally competitive European industry through the **twin green and digital transition**. The development of new and cross-cutting technologies will boost the transformation of existing value chains and the creation of new ones.

Supporting **net-zero manufacturing** is a key objective of the Net-Zero Industry Act and has a crucial role to play in the transition towards a green and sustainable society, going from ‘smart factory’ to a ‘smart sustainable value chain’. Smart manufacturing will help develop the materials and products needed to support net-zero and less polluting industries. There is much scope for improvement in circularity technologies applicable to different value chains, with special attention needed for product design, re-use, disassembly, remanufacturing/upgrading, recycling, and ‘Zero-X’ – zero defects, zero breakdowns and zero waste.

Digital technologies, like big data, advanced computing, and networking (including quantum), AI, robotics, photonics and the industrial virtual worlds will transform the practices of research, design and engineering, with better performing net-zero solutions and increased productivity in all sectors. Quick-response services can support hyperflexible production using, e.g. trustworthy AI and digital twins, with digitally enabled certification and qualification of processes and products.

In addition to decarbonisation, **energy-intensive industries** need to embrace the circular economy as a key pillar in the design of their value chains. This will be fundamental to their resource efficiency (in terms of materials, energy and water). Particularly important in this context is the innovative upcycling of secondary raw materials and waste and the development of sustainable and resource-efficient industrial processes.

The EU has set an ambitious goal for Europe to become the first climate-neutral continent by 2050. In some areas the key solutions for achieving significant reductions in emissions are already in the market. In crucial parts of the economy, as is the case for energy-intensive industries, many of the tools needed for such a significant reduction are still at an earlier stage of industrial or commercial development.

Further development and deployment of technologies identified in the ERA (European Research Area) industrial technology roadmaps for circular technologies and for low-carbon technologies will be essential to achieve this goal. Manufacturing processes, supply chains, cyber-physical systems or cities will become more climate neutral and less polluting, and circular solutions will include AI and digital twins, and the deployment of common European data spaces like those under the Digital Europe Programme.

Across industries, the human dimension (including gender differences) will be stressed via the **Industry 5.0 paradigm**.

To successfully move from **innovation to deployment**, a more effective transfer from small-scale industrial demonstrators to first-of-a-kind climate-neutral demonstrators is needed.

Business cases and exploitation strategies for industrialisation:

This section applies only to those topics in this Destination, for which proposals should demonstrate the expected outcomes by including a *business case and exploitation strategy for industrialisation*.

A business case and a credible initial exploitation strategy are essential components in the ultimate success of an industry-based project, as well as its prospects to attract further investments for deployment. They will both be decisive factors under the impact criterion, and proposers are encouraged to use the extended page limit to present a carefully considered business case and exploitation strategy, backed by the management of the companies involved.

The *business case* should demonstrate the expected impact of the proposal in terms of enhanced market opportunities for the participants and deployment in the EU, in the short to medium term. It should describe the targeted market(s); estimated market size in the EU and globally; user and customer needs; and demonstrate that the solutions will match the market and user needs in a cost-effective manner; and describe the expected market position and competitive advantage.

The *exploitation strategy* should identify obstacles, requirements and necessary actions involved in reaching higher TRLs (Technology Readiness Levels), for example: securing the required investments, including through possible synergies with other programmes; accessing the required skills; matching value chains; enhancing product robustness; securing industrial integrators; and user acceptance.

For TRLs 6 and 7, a credible strategy to achieve future full-scale deployment in the EU is expected, indicating the intentions of the industrial partners after the end of the project.

Where relevant, in the context of **skills**, it is recommended to develop training material to endow workers with the right skillset in order to support the uptake and deployment of new innovative products, services, and processes developed in the different projects. This material should be tested and be scalable, and can potentially be up-scaled through the European Social Fund Plus (ESF+). This will help the European labour force to close the skill gaps in the relevant sectors and occupational groups and improve employment and social levels across the EU and associated countries.

For topics in this destination, consortia (if selected for funding) could consider **voluntary contributions in terms of data, indicators and knowledge to relevant Joint Research Centre (JRC) platforms** for capitalising the knowledge developed in their projects and become more policy relevant:

- INnovation Centre for Industrial Transformation and Emissions (INCITE) (<https://innovation-centre-for-industrial-transformation.ec.europa.eu/>).
- The Energy and Industry Geography Lab: EIGL (<https://energy-industry-geolab.jrc.ec.europa.eu/>).

Innovation Actions — Legal entities established in China are not eligible to participate in Innovation Actions in any capacity. Please refer to the Annex B of the General Annexes of this Work Programme for further details.

Manufacturing

Proposals are invited against the following topic(s):

HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-01: Integrated approaches for remanufacturing (Made in Europe Partnership) (IA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 and 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 35.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 5 and achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome: The manufacturing industry should benefit from the following outcomes:

- Enable an industrial ecosystem¹³ to double the volume of remanufactured components in the Union, compared to 2021, for the sectors and products considered;
- Stimulate new synergies for circularity in manufacturing industries;

¹³ notably ecosystems acknowledged under the European Industrial Strategies

- Increase significantly the capability in Europe to implement remanufacturing technologies for retaining, reusing, upgrading or adapting the function of products and components;
- Support skills and education capabilities for remanufacturing; and
- Support the development or revision of standards to better support remanufacturing.

These outcomes are also expected to benefit downstream applications in the net-zero industries.

Scope: Remanufacturing (including de-manufacturing) is the rebuilding of products using combinations of reused, repaired and new components. Remanufacturing aims to retain the usefulness of both products and components and is an essential step in achieving full industrial circularity. Ultimately, remanufacturing is expected to reduce the level of resource consumption, as well as the carbon footprint of products and logistic chains. Such approaches will strengthen industrial resilience by building up a remanufacturing capacity in Europe, including possible applications in net-zero technologies and components.

Proposals should demonstrate cutting-edge remanufacturing approaches, covering de-manufacturing and appropriate manufacturing technologies, model-based systems engineering, quality control and business models. Repurposing of products (at the level of systems or components) may also be considered. This approach calls for remanufacturing technologies at the factory level, as well as for their integration into circular value loops – within specific industrial sectors or across industrial sectors. In general, the approaches should integrate traditional manufacturing processes, such as additive manufacturing, machining and welding, with automation, robotics and digitalisation.

Recycling technologies for the generation of secondary raw materials are not within the scope of this topic.

Proposals should address all of the following:

- Remanufacturing technologies and processes and/or system engineering, building on advances in data sharing and AI;
- Mass de-manufacturing, such as disassembly, separation and sorting;
- Capability to produce high-quality products from a wide range of resources (new and remanufactured components and materials);
- Methodologies to facilitate decisions made at the end-of-use or end-of-life phase at the level of components or systems;
- Measurement, verification and inspection approaches assuring high quality, traceability and compliance with quality standards;

- Stringent data sourcing, interoperability and processing, coupled to robust AI technologies (leveraging on existing ontologies and through the implementation of the FAIR data principles¹⁴);
- International standards, building on existing standards or contributing to future standardisation, with a focus on remanufacturing standards; and
- New sets of skills required for remanufacturing implementation at the European level.

Proposals aiming to develop new products should additionally cover the design of these products for circularity. Points to consider in this case are prioritising the use of recyclable materials and recyclable or reusable components; and increased adaptability, exchangeability and lifetime of components.

Proposals should consider where relevant

- The EU regulatory framework, notably the Ecodesign for Sustainable Product Regulation¹⁵ and the EU waste/sectoral legislation¹⁶;
- The Ecodesign approach, especially the circular-by-design approach including modularity, reparability, adaptability and exchangeability of components as well as refurbishment and repurposing of products or components; and
- The Digital Product Passport: information about products along their overall lifecycle needs to be collected along the remanufacturing operations.

Proposals should include a business case and exploitation strategy, as outlined in the introduction to this Destination. It is essential that the business model address the entire lifecycle of remanufacturing, including logistics. They should assess the circularity and decarbonisation that can be achieved, as well as the economic case and competitiveness, and make a corresponding contribution to the standardisation of lifecycle performance metrics. Regarding decarbonisation, proposals should address the expected reductions in energy consumption and GHG emissions, and – where applicable – impact net-zero technologies and components.

Where relevant, proposals are encouraged to build on, or seek collaboration with, existing projects and develop synergies with other relevant European, national or regional initiatives and funding programmes. In particular, links are encouraged with

- the projects funded under earlier relevant topics, for example the topic on re-manufacturing, HORIZON-CL4-2023-TWIN-TRANSITION-01-04: Factory-level and value chain approaches for remanufacturing; or
- the Digital Europe programme, e.g. in the area of Manufacturing Data Spaces.

¹⁴ Turning FAIR into reality: https://ec.europa.eu/info/sites/default/files/turning_fair_into_reality_1.pdf

¹⁵ https://ec.europa.eu/environment/publications/proposal-ecodesign-sustainable-products-regulation_en

¹⁶ https://environment.ec.europa.eu/topics/waste-and-recycling/waste-law_en

To address the requirements above related to business models and to relevant skills (and where applicable to design), appropriate contributions from Social Sciences and Humanities (SSH) are indispensable. Where appropriate social partners or social innovation may be considered.

International cooperation is encouraged, especially with Japan or Taiwan.

This topic implements the co-programmed European Partnership Made in Europe.

HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-02: Physical and cognitive augmentation in advanced manufacturing (Made in Europe Partnership) (RIA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 and 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 35.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3 and achieve TRL 5-6 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁷.</p>
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

¹⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Expected Outcome: Manufacturing industry should benefit from the following outcomes:

- Empower workers at all levels in factories, both individuals and teams, through breakthrough augmentation technologies embodying the next stage in human-machine interactions;
- Enhance, with the help of these technologies and related contributions from Social Sciences and Humanities (SSH), the flexibility, inclusiveness, safety and well-being of workers in the industrial environment, leading to more attractive jobs in the EU, attracting and retaining talents from new generations (e.g. Generation Z);
- Foster the human-centric aspect of the Industry 5.0 model, through insights into how technology affects the working environment and the organisation, and into how technology can support the worker in their career (including the associated meaningful job profiles).

Scope: The rising complexity of discrete manufacturing operations requires workers to adapt to the introduction of new breakthrough technologies, machines, processes, and production environments (considering where appropriate legacy machinery). In addition, labour shortages are growing. The development of a human-centric culture that places the humans at the centre of the manufacturing operation is crucial. Augmentation technologies support and empower the workforce, leading to more high-quality jobs and prosperity beyond efficiency. They can relieve people of non-creative tasks or reduce human strain and stress and potential risks in the workplace. Augmentation technologies can therefore produce benefits for both workers and managers and can become the most effective ways of supporting, or amplifying, human abilities.

Proposals should develop breakthrough technologies to augment human capabilities and skills. Proposals should cover all of the following aspects:

- Develop breakthrough solutions (based on e.g. mechatronics, sensing and photonics) for human-centric approaches; these include innovative perception technologies to sense the shopfloor environment and to predict the intentions of humans, also leading to enhanced worker safety and reduction of discomfort, fatigue and physical and psychological stress;
- Develop innovative methodologies, potentially using AI, to provide reasoning capabilities and to control the behaviour of the manufacturing systems, to support humans and to interact and communicate with them; this will foster natural improvements in efficiency, sharing of knowledge, inclusiveness, accessibility and flexibility;
- Assess and take into account the needs of managers and workers, at the beginning of the design phase and throughout all stages up to the development of a prototype, ensuring that both workers and managers have the right skills to implement the innovative solutions and that the solutions take into account the variety of workforces;

- Develop new methodologies to perform an assessment of augmentation technologies and their suitability and value added (beyond economics) for workers in all their diversity.

Digital-twin models can be potentially used in the development of new assessment methodologies to perform validation in a virtual scenario.

The assessment methodologies may lead to new standards for the validation of the developed systems, or indicate how new or existing standards could benefit from a human-centric approach and how the developed systems could support this.

Proposals should take into account Social Sciences and Humanities (SSH) contributions regarding human-related barriers for the uptake of augmentation technologies in industrial environments, such as ergonomics, user experience, comfort, trust, feeling of safety, knowledge sharing and liability in modern production facilities. Proposals should specifically address gender, age, disability and other anthropometric and ergonomic considerations, and impacts across diverse demographic groups. Social partners (e.g. trade unions) may also be considered. Optionally, proposals may include test and experimentation environments such as living labs for validation.

Proposals should include a business case and exploitation strategy, as outlined in the introduction to this Destination (adapted to the expected TRL of this topic).

This topic implements the co-programmed European Partnership Made in Europe.

HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-05: **Advanced manufacturing technologies for leadership of EU manufacturers in products for the net-zero industry (Made in Europe Partnership) (IA)**

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 and 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 42.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by

	3 pages.
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Expected Outcome: The European Union's manufacturing industry should benefit from the following outcomes:

- Enhanced capabilities in the areas of strategic and high-value-added products for the net-zero industry; and
- Increased production capacity for clean technologies in the Member States and Associated Countries, diversifying supply sources, and ensuring high environmental standards.
- Contributions to reaching the targets set by the Net Zero Industry Act, in ensuring the reduction of strategic dependencies.

Scope: The net-zero industry relies on manufactured products, components and equipment.

The focus is on advanced discrete manufacturing processes for such products, components and equipment, which enable new product features (in terms of geometry, weight, robustness, functional integration, re-use-potential); advanced production processes including automation; or the use of innovative materials. The processes should improve productivity and upscaling, decrease waste, and shorten time-to-market and process integration times.

Proposals should address manufacturing technologies applicable to products for *at least one* of the strategic net-zero technologies listed in Annex I of the Net-Zero Industry Act:¹⁸

Proposals should address the key manufacturing technologies that generate cross-sectoral impact among the chosen net-zero technology sectors.

While operating in synergy with initiatives that focus on the design and engineering of strategic products and solutions, research and innovation should focus on the innovative development and application of one or more of the following manufacturing technologies and associated systems:

- Additive manufacturing or cladding for manufacturing and/or repair;
- Advanced joining technologies;
- Advanced forming and material shaping technologies;
- Surface processing technologies, functionalisation, nano- or micromanufacturing; and
- High-precision machining and assembly.

Proposals should consider integrating

- Innovative metrology and inspection methods, aiming at first-time right manufacturing;

¹⁸ https://ec.europa.eu/commission/presscorner/detail/en/qanda_23_1666

- Advanced and flexible automation approaches, for instance for large components, complex assembling or handling of hazardous materials;
- Digital twins and data mining for fast ramp-up, scale-up and real-time optimisation of production;
- Circular manufacturing approaches and reduced reliance on Critical Raw Materials, in view of increasing the options for re-manufacturing, disassembly, recycling, etc.; and
- Relevant skills and standards.

In addition the overall environmental impact of the manufacturing processes should be minimal in terms of energy and resource consumption and CO₂ emissions.

Proposals should include a business case and exploitation strategy, as outlined in the introduction to this Destination. The aspect of manufacturing in the Union is particularly important in this topic.

The attention of proposers is also drawn to the complementary topic HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-34: Smart integration of net zero technologies into Energy Intensive industries. Technologies covered by that topic are not in the scope of this topic.

This topic implements the co-programmed European Partnership Made in Europe.

Construction

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-05-TWIN-TRANSITION-11-two-stage: Enhanced logistics and operations of construction sites (IA)

Call: INDUSTRY two-stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 13.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply: Applicants submitting a proposal under the blind evaluation

	pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 5 and achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹⁹ .
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome:

- Reduce the time taken to carry out site operations of construction or demolition works;
- Increase the application of on-site circular approaches such as re-use, preparing for re-use and recycling, resulting in reduced waste generation and improved waste management;
- Improve health and safety of construction workers.

Scope: Construction works on the building site, whether for civil infrastructure or for buildings, often involve a variety of complex operations apart from the actual assembly of elements. These can include transport and movement of construction products to and around the site; storage of products, materials and other items on site, and their eventual removal;

¹⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

dealing with packaging of products and other consumables related to the construction works; temporary accommodation for workers; temporary utility connections and associated works; planning of works; coordination of trades and operations, including machines as well as human workers. Mistakes and delays in construction works can lead to negative consequences such as risk of accidents, waste, pollution, inefficiency and financial consequences.

Construction works need to be carried out more quickly and efficiently, with less room for error and waste. This could be improved through technology-driven innovations linked to on-site operations and logistical aspects.

Proposals should:

- Develop technologies that improve the efficiency of operations on the construction site, leading to more productive, faster and more efficient working practices. The technologies should be interoperable with, or build upon existing industry-wide practices, such as Digital Twins and Building Information Modelling tools. Speed and efficiency improvements should not be at the expense of safety.
- Address the traceability of construction products and other items delivered to the site, installed on site, and removed. If relevant, this can also include coordination with other operations outside the construction site boundary.
- Integrate circular economy approaches, such as waste prevention and the management and recovery of construction and demolition waste;
- Address new ways for site operations to reduce the chances of errors and accidents/taking better account of unexpected disruptions;
- Address human-centric and Social Science and Humanities (SSH) aspects of technologies or tools that are developed. Take into consideration potential social innovation mechanisms that can facilitate the market uptake of the developed tools.

Proposals should include a business case and exploitation strategy, as outlined in the introduction to this Destination.

Proposals may choose to contribute to relevant European standardisation efforts. Proposals should seek to build synergies with relevant other work, for example, EU-funded projects under the New European Bauhaus Facility, or Horizon Europe partnerships including Built4People.

Energy-Intensive Industries - Decarbonisation and Energy Efficiency

Proposals are invited against the following topic(s):

HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-31: From heat-driven processes to the use of mechanical and electric forces (Processes4Planet partnership) (IA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 8.00 and 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 25.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7 by the end of the project – see General Annex B.
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome: Energy Intensive industries will benefit from the following outcomes:

- Enable the integration of renewable electricity in the process industries by transitioning from heat driven to direct electricity driven process units in a plant;
- Contribute to achieving the EU climate neutrality objective as well as proposed 2040 90% GHG reduction target²⁰;
- Achieve 25% energy savings compared to processes based on relevant Best Available Technologies;
- Improve the economic viability of the entire unit compared to the state-of-the-art heat-driven process and increase the competitiveness and resilience of the European process industry.

Scope: The generation of heat, which is often sourced from fossil fuel combustion, is the biggest consumer of energy in the process industries and responsible for 60% of process industries GHG emissions. Heat input is in particular commonly used in separation and drying processes. The topic focuses on the development of new electrically driven industrial processes where heat input in such processes is replaced by electro-mechanical power or other

²⁰

[2040 climate target - European Commission \(europa.eu\)](https://european-council.europa.eu/media/e3001c7d-326d-476a-962d-694c206c860f/en/attachment/data/2020/02/2040-climate-target.pdf)

forms of direct electrical input. These electrified processes could represent a major reduction of GHG emissions as well as an important source of energy savings. The scope does not include conventional electric heating or the use of heat pumps.

Proposals under this topic should address all of the following:

- Demonstrate and/or integrate highly efficient electrically driven technologies e.g., membrane technology, power ultrasound, mechanical activation, mechanically or electricity induced forces, electrochemical processes, that can replace traditional heating processes;
- Demonstrate and evaluate energy efficiency gains;
- Prove the effectiveness of the technologies towards GHG emission avoidance;
- Take a holistic approach which may include aspects such as redesign of equipment, requirements for advanced materials and integrated electrified processes;
- Ensure process safety, sufficient flexibility and ease of process control;
- Showcase improved CO₂ reduction potential, performance, scalability and cost efficiency of the proposed solution through, at least, one realistic use case that can be replicable with demonstrable economic return.

The inclusion of a GHG avoidance methodology²¹ is recommended and should provide detailed descriptions of baselines and projected emissions reduction.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination, underlining how the proposal will serve the purpose to boost industrial decarbonisation technologies supply chain in Europe. As project output an elaborated exploitation plan should be developed, including preliminary plans for scalability, commercialisation and deployment (feasibility study, business plan and financial model) indicating possible private and public funding sources (e.g. Innovation Fund, InvestEU and cohesion policy funds). Societal- and environmental impact as well as implications for the workplace (including skills and organisational change) should be outlined.

This topic implements the co-programmed European partnership Processes4Planet.

HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-32: Green and resilient flexible production processes (Processes4Planet partnership) (IA)

Call: INDUSTRY

²¹ That could follow Innovation Fund methodology: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/innovfund/wp-call/2021/call-annex_c_innovfund-lsc-2021_en.pdf

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 8.00 and 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 25.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome: Energy Intensive industries will benefit from the following outcomes:

- Increase significantly the process flexibility offering a step change in the capacity of individual production plants to promptly and frequently adapt to energy input variations over a significant range and with increased speed;
- Enable new flexible and efficient production processes, leading to economic and sustainability gains despite of volatile energy supply variations;
- Increase significantly raw material and energy efficiency while facing variations of the renewable energy input when compared to state-of-the-art industrial processes;
- Contribute to achieving EU climate neutrality objective as well as Commission recommendation of reducing EU GHG emissions by 90% by 2040 ²².

Scope: Flexibility of energy intensive production processes is a necessity for the use of alternative energy carriers as the supply of energy by renewable sources is subject to significant variations and the competitive potential of energy storage is limited. The optimal use of the renewable energy supply will require processes that can perform fast transitions to allow continuous and efficient operation when the renewable energy input varies. The limiting factor addressed by the topic is the ability of the production plants to promptly change loads and throughputs in large ranges without negative consequences for the equipment, while staying energy and resource efficient. Storage options and use of several sources of renewable energy can be included, the combination (hybridation) of various decarbonisation technologies can also be considered.

²²

[2040 climate target - European Commission \(europa.eu\)](https://european-council.europa.eu/media/e300147f-326d-4761-995d-6f8e50b3417c/attachment_data/data/e300147f-326d-4761-995d-6f8e50b3417c.pdf)

Proposals under this topic should address all of the following:

- Address the redesign and modification of existing processes, including, as relevant, modifications of process steps or equipment and smart combinations of renewable energy sources, thereby improving the overall operation flexibility of the process and resulting in continuous efficient operation;
- Propose redesign and modification of plants and processes to increase their flexibility response rate (e.g., faster ramp up or ramp down) while maintaining a high energy- and resource efficiency;
- Demonstrate and evaluate material and energy efficiency gains from a holistic view of the processing plants and the energy systems as well as economic benefits by exploiting the price variations on the energy markets;
- Showcase improved performance, scalability and cost efficiency of the proposed solution through at least one realistic use case at pilot scale;
- Define necessary skills of the proposed solution, to enable their industrial implementation.

Digital tools and advanced control to support the operation and the flexibility of the processes can be elements of a solution.

The inclusion of a GHG avoidance methodology²³ is recommended and should provide detailed description of baselines and projected reductions.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination, underlining how the proposal will serve the purpose to boost industrial decarbonisation technologies supply chain in Europe. As project output an elaborated exploitation plan should be developed, including preliminary plans for scalability, commercialisation and deployment (feasibility study, business plan and financial model) indicating possible private and public funding sources (e.g. Innovation Fund, InvestEU and cohesion policy funds). Societal- and environmental impact as well as implications for the workplace (including skills and organisational changes) should be outlined.

This topic implements the co-programmed European partnership Processes4Planet.

HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-33: Integrated use of renewable energy carriers in industrial sites (Processes4Planet partnership) (RIA)

Call: INDUSTRY

²³ That could follow Innovation Fund methodology: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/innovfund/wp-call/2021/call-annex_c_innovfund-lsc-2021_en.pdf

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 25.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-6 by the end of the project – see General Annex B.
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome: Energy Intensive industries will benefit from the following outcomes:

- Enable the integrated use of different types of renewable energy carriers in industrial sites²⁴ with the aim to provide a constant robust low-carbon and economic energy input to process industries;
- Pave the way for strategic industrial cooperation to cope with fluctuations of the energy inputs and to achieve overall energy and cost efficiency;
- Support stability and operational flexibility of the power grid, including implementation of storage solutions to buffer energy demand peaks;
- Enable the use of renewable energy labelling and documentation, scheduling of energy use and price compensation models to achieve optimal grid load;
- Improve the technical and economic feasibility of the integrated use of renewable energy carriers in industrial sites compared to other solutions with a similar CO2 reduction potential.

Scope: There is a broad range of renewable energy carriers (e.g., electricity, hydrogen, solar heat, ammonia, etc) which can be utilised in the process industries. Many of them are provided with significant temporal variations, e.g., renewable electricity and solar heat. Integrated design and operation of these highly complex systems within process industry sites are needed to cope with the fluctuations of the energy inputs and to achieve overall energy

²⁴ Industrial sites refers to industrial clusters, hubs, parks formed by several plants of the energy intensive industries. Large individual plants may be considered in those sectors where plants are not typically integrated in industrial sites.

and cost efficiency. Industrial symbiosis and integration of production systems with energy systems in industrial sites can ensure overall emission reduction. These approaches can increase the efficiency of generation and enable solutions that avoid losses, supporting stability and efficiency of power systems.

Proposals under this topic should:

- Develop highly efficient technologies for, and prototype designs of, integrated structures of industrial sites, including storage elements and solutions for their integrated operation under varying conditions;
- Take due account of logistic aspects, risk assessment and management at plant level;
- Develop systemic solutions embracing industrial symbiosis, and if relevant, contribute to further evolution of existing Hubs4Circularity²⁵;
- Consider the interaction with the supply side, in particular electric power grids, hydrogen pipelines or district heating;
- Demonstrate full integration and use of advanced digital technologies from fields of distributed process control strategies, and data driven AI based optimisation and the application of model-based technologies for the improved, safe and efficient operation of industrial plants and sites, including the interaction with different grids;
- Demonstrate and evaluate energy efficiency and CO₂ footprint reduction by optimal integration of energy from renewable sources as well as providing demand side flexibility;
- Propose new ways to adapt the workplaces and organisation of site management to ensure that the solutions can be widely implemented.

Proposals should include energy efficiency, techno-economic and life-cycle assessment considerations of the overall process.

Proposals should consider representative real industrial sites demonstrating the solutions at least in open-loop computations. This should be done in parallel to the actual operation of the plants with validation of the benefits by simulations with accurate models. Experiments involving real industrial sites are encouraged.

Proposals should actively pursue involvement of all actors in the value chain, from industrial sites management to plant operators, and renewable energy providers. Interoperability as well as secure and trusted data sharing between stakeholders in the value chain should be considered, in accordance with the FAIR²⁶ data principles. Proposals submitted under this topic should include a business case and exploitation strategy (as outlined in the introduction

²⁵ [Hubs4Circularity \(h4c-community.eu\);Horizon Europe strategic plan 2025-2027-KI0223326ENN.pdf](https://hubs4circularity.eu/Horizon_Europe_strategic_plan_2025-2027-KI0223326ENN.pdf)
(page 94)

²⁶ Findable, Accessible, Interoperable, Reusable data

to this Destination) underlining how the proposal will serve the purpose to boost industrial decarbonisation technologies supply chain in Europe.

A strategy for skills development to master the challenges of such integrated systems should be included associating social partners. Attention should be given to using results from existing initiatives that have developed education and skills development concepts in this area.

This topic implements the co-programmed European partnership Processes4Planet.

HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-34: Smart integration of net zero technologies into Energy Intensive industries (Processes4Planet and Made in Europe partnerships) (IA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 and 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 25.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome: Manufactures of net zero technology solutions, as well as energy intensive industries will benefit from the following outcomes:

- Enable the sustainable and efficient use of energy in the energy intensive industries by bridging the gap between users and manufacturers of net-zero solutions for the energy-intensive industries.
- Foster win-win situations in which equipment manufactures co-create solutions with the energy-intensive industrial sectors opening new markets for the net-zero technologies;
- Develop new net-zero technologies industrially integrated processes that support the decarbonization of industry and offer new market opportunities;

- Enhance competitiveness of the European Energy Intensive and manufacturing industries;
- Accelerate the adoption of net-zero technologies in the energy intensive industries.

Scope: As the industry decarbonises net-zero technologies²⁷ can be applied to a wide range of energy intensive sectors and processes. Furthermore, the Net-Zero Industry Act which is part of the Green Deal Industrial Plan, is aiming at increasing the manufacturing capacity of strategic net-zero technologies to meet at least 40% of the EU's annual deployment needs. In this framework the aim of this topic is to accelerate the deployment of net-zero technologies in at least one industrial sectors through a closer collaboration between, net-zero technology manufacturers and energy intensive industries.

Proposals under this topic should address several of the following:

- Facilitate collaboration between at least one energy intensive industrial sector, with manufacturers of net-zero technology solutions, as well as where relevant engineering, and construction firms for the smart integration of one or several net-zero technologies in specific processes. Several energy intensive industrial sectors can be considered if they share similar processes and energy related needs;
- Assess the needs of the proposed industrial sector(s) to define 'standard' process(es) and assess operational energy needs through a closer exchange with net-zero technology manufacturers and suppliers in order to effectively design sustainable and cost-efficient energy solutions;
- Optimise and adapt technologies, products and solutions proposed by manufacturers of net zero technologies to meet the industrial sector needs;
- Propose and demonstrate the necessary modifications of processes for the efficient and flexible incorporation and the integration of net zero technologies in existing industrial plants;
- Demonstrate the effectiveness and replicability of the proposed approaches allowing to move from custom-built project by project approach for each specific industrial plant and process, to more streamlined, standardised yet flexible solution for industrial sector(s) and/or processes;
- Develop solutions offering an optimal balance between standardisation and flexibility as well as providing high-quality tailored solutions at competitive prices;
- Support the development of skills for the integration of net-zero technologies into energy intensive industries.

²⁷ Net-zero technologies as defined in the Net Zero Industry Act, Annex I: Strategic Net-zero Technologies

Proposals should involve all actors in the value chain from the manufacturers of net zero technology solutions to energy intensive industries and engineering and construction firms. Interoperability and secure and trusted data sharing between the stakeholders of the value chain should be ensured.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination. As project output an elaborated exploitation plan should be developed, including preliminary plans for scalability, commercialisation and deployment (feasibility study, business plan and financial model) indicating possible private and public funding sources (e.g. Innovation Fund, InvestEU and cohesion policy funds). Societal- and environmental impact as well as implications for the workplace (including skills and organisational changes) should be outlined. Proposals should ensure dissemination and replication of the proposed approaches for wide deployment, including advising and building capacity among the relevant actors. Proposals should be based on a sound techno-economic analysis that confirms the economic viability in view of evolving regulatory frameworks.

The inclusion of a GHG avoidance methodology²⁸ is recommended and should provide detailed description of baselines and projected reductions.

The attention of proposers is also drawn to the complementary topic HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-05: Advanced manufacturing technologies for leadership of EU manufacturers in products for the net-zero industry.

This topic implements the co-programmed European partnerships Processes4Planet and Made in Europe.

HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-37: Solving issues in carbon-neutral iron and steel making processes with diverse input materials of varying quality (Clean Steel Partnership) (RIA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 14.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 28.00 million.
<i>Type of Action</i>	Research and Innovation Actions

²⁸ That could follow Innovation Fund methodology: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/innovfund/wp-call/2021/call-annex_c_innovfund-lsc-2021_en.pdf

<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 by the end of the project – see General Annex B.
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome: The topic enables a fast and reliable transition to innovative technology pathways for carbon-neutral iron and steel making by tackling fundamental problems and boundary conditions with a system-level approach. This approach will target input materials, processes, and iron /steel output quality, considering the needs to reduce production costs, find alternative materials and solutions, improve process/energy efficiency and achieve at least the traditional product quality.

Iron and steel making plants constitute complex systems where the product quality is bound to a large set of variables. Variations in feedstock composition, along with reductant choice and mix, introduce noticeable variations in process metallurgy, its kinetics and thermodynamics, with influence on the morphology of the intermediates and consequent impact on the next phases of production, and lifetime, quality, safety and reliability of the finished product.

The strong dependence of the final steel quality on the variable quality of the raw materials and the balance of the production process, has to be taken into account under the consideration of costs, energy availability, sustainability, overall and specific energy efficiency, CO₂ emissions and strategic resources (in particular strategic raw materials²⁹).

Projects are expected to contribute to at least three of the following outcomes:

- Validate innovative carbon-neutral iron and steel making solutions within a system-level approach and in consideration of diverse materials with varying quality (raw input materials and reductants mix) and energy needs. Address high-risk factors at macroscopic and microscopic level through detailed characterisation of the physical and chemical interactions that could compromise the optimal functioning of the processes;
- Solve system-level issues within at least two low-CO₂ production routes;
- Define solutions and provide concepts to address possible modifications or material substitutions in innovative installations for low CO₂ iron and steel production;
- Improve low-CO₂ steel production reliability to target high-quality products: i) clarify the effect of material and process variables, and overall system aspects; ii) clarify the influence of changing crude steel quality on the properties of the produced steel, with the purpose to achieve quality and extended lifespan of products; iii) clarify the impact of diverse input materials with varying quality on the residue characteristics and on its potential valorisation and use;

²⁹

<https://www.consilium.europa.eu/en/infographics/critical-raw-materials/>

- Provide an impact analysis covering the materials and energy balance of identified solutions, viability and byproducts.

Scope: The topic calls for collaborative approach between academia, industry (including SMEs) and research organizations with the purpose to support: i) understanding, validating, and solving essential problems to allow maturity of innovative technologies in the industrial investment panorama for future carbon-neutral iron and steel making, ii) accelerating a reliable transition to climate neutrality in view of the end of the free ETS allowances by providing solutions optimized for different scenarios, and iii) fulfilling the Commission Recommendation 2024/774³⁰ on a Code of Practice on industry-academia co-creation for knowledge valorisation.

Proposals should address at least four of the following points:

- De-risk and extend operational windows of low CO₂ iron- and steel making technologies considering system-level scenarios;
- Target the heterogeneity of available reductants and feedstock materials, their different physical states and the mixed use of them. In this context, the sustainability of the process to produce them should be considered, along with the requirements for various grades of purity;
- Achieve high-quality steel products characterized by increased tolerances of contents of contaminants, originating from low quality raw materials. Adapt the micro-structure and control application-specific properties by acting on material preparation, processes and process technologies. Include the development of detection / measurement systems and multi-scale models as needed;
- Analyse, micro- and/or nano-characterise, and compare low-carbon production of liquid iron and/or crude steel combining the use of direct reduced iron (DRI) with varying qualities and raw materials from primary and secondary sources to push for closing material cycles;
- Couple the analysis with needs for plant design optimisation and measures to mitigate risks during operation;
- Define pre-processing needs of primary and secondary iron containing materials for iron and steelmaking targeting low environmental impact. Analyse the effects on the production process and product metallurgy;
- Consider analytical research infrastructures. Data should be supporting simulations- and modelling needs in line with FAIR (Findability, Accessibility, Interoperability and Reusability) principles. Interoperability of data sharing should be addressed;

³⁰

https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202400774

- Consider effects of solutions indicated in the outcomes of the proposed project on specific regional or country level conditions, including cross-sectorial scenarios, such as energy availability, water use and recovery of water and other resources from the steelmaking process to use in other industrial sectors and vice versa, where applicable;
- Use tools such as, but not limited to, life cycle assessment (LCA) or life cycle costing (LCC) to create benchmarks for progress measurement towards carbon neutrality;
- Aim at taking advantage of pilot plants in Europe to create correlations between real-world processes and laboratory-based research.

Multidisciplinary research activities should address at least one of the following:

- Introduce sensors or develop new ones, especially able to work in very high temperature environments. They may include a soft and integrated set of sensors. Use fast digital techniques for data collection, processing and analysis. Develop enhanced models with different levels of resolution and integrate Machine Learning (ML)/AI for comprehensive understanding of process mechanisms;
- Use input from finalised/ongoing research in heat recovery via heat exchange technologies that could contribute to reduction of external energy use;
- Develop concepts for on-site hydrogen production techniques at very low cost.

Proposals submitted under this topic should include a business case and exploitation strategy, for at least one process route, as outlined in the introduction to this Destination. If more than one process route is part of the project, the selection of the preferred one should be duly justified.

Additionally, a strategy for skills development to target innovative solutions should be presented, associating social partners when relevant.

The actions should envisage clustering activities with other projects funded under this topic. Cross-projects co-operation should include consultations and joint activities on cross-cutting issues and share of results not bound to intellectual property, as well as participating in joint meetings and communication events. To this end proposals should foresee a dedicated work package.

Projects (if selected for funding and if relevant) could consider clustering activities with one project funded under topic HORIZON-CL4-INDUSTRY-2025-01-DIGITAL-61.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

This topic implements the European co-programmed Clean Steel Partnership.

Energy-intensive Industries - Circularity and Zero Pollution

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-05-TWIN-TRANSITION-35-two-stage: Developing and embedding upcycling technologies into viable business (Processes4Planet partnership) (IA)

Call: INDUSTRY two-stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 8.00 and 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 48.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p> <p>To ensure a portfolio including support leading to the recovery and upgrading of industrial infrastructure in Ukraine, grants will be awarded to applications not only in order of ranking, but also to at least one project involving at least one non-profit partner and at least one industrial partner established and located in Ukraine, provided that the application attains all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply:

	Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ³¹ .
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome: Energy Intensive industries will benefit from the following outcomes:

- Prove the technical, economic, and environmental feasibility of the upcycling of end-of-life waste materials by process industries in integrated circular schemes – including for supplying the value chains of net zero technologies and components;
- Enable doubling the ratio of secondary raw materials upcycled leading to a significant increase in resource, including energy efficiency and improved carbon lifecycle across the value chain compared to present levels;
- Increase the competitiveness of the European process industry, including by providing new business opportunities and revenue flows for recycling companies benefiting particularly SMEs – including for supplying the value chains of net zero technologies and components;
- Foster the use of digital tools as well as the data sharing, and FAIR (Findability, Accessibility, Interoperability and Reusability) digital assets principles.
- As appropriate in one or more projects, contribute to the reconstruction, recovery, circularity and upgrading of industries of Ukraine.

Scope: The recycling of end-of-life materials into valuable materials that can replace primary raw materials requires integrated systems from the collection to dismantling and separation to their final processing. The technologies and implementation (including logistics and economics) of such circular schemes should be addressed in an integrated way. The innovation needed will depend on the addressed waste category. However, even if the upcycling technologies and implementation may be sector/material specific, the cross-sectorial elements are important and should deserve due attention.

Proposals are expected to address all of the following:

³¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Develop processes for the upcycling of end-of-life materials in an integrated way, including the development of better novel separation, sorting and processing technologies as well as digitalisation and automation of the processes as necessary;
- Integration of technologies and logistics systems into business models of circular schemes;
- Focus on processes and secondary raw materials which offer the highest additional upcycling potential and accordingly develop novel upcycling technologies and processes including purification technologies;
- Identify the likely impacts of the upcycling solutions with respect to economic and job creation potential, as well as environmental footprint referring to the full set of planetary boundaries including freshwater intake aspects;
- Where relevant, minimise the presence of substances of concern to mitigate the impacts of multiple recycling loops as well as the accumulation of additives and trace materials in secondary resource streams;
- Consider advanced monitoring and sensing along the value chains and improved data completeness, accuracy and interoperability between the process and recycling companies. In this context, digital tools, such as a Digital Product Passport for tracking and tracing of materials throughout the lifecycle of a product should be applied and data sharing should be addressed.

Proposals should include techno-economic and life-cycle assessment of the overall process (including of the carbon footprint) and demonstrate the economic viability of the approach. This can be combined with an analysis of the effect of regulatory changes and demand side stimulation measures.

Projects are encouraged to integrate existing Hubs4Circularity³² as nodes in the value chains. Proposals should actively pursue the involvement of all actors in the value chain from the process industry to designers, operators, formulators, recyclers, public authorities, and standardisation actors.

Additionally, a strategy for skills development should be presented associating social partners where relevant. Particular attention should be given to the cooperation with existing initiatives having developed education- and skills activities and outcomes in this area.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination, underlining how the proposal will serve the purpose to boost industrial decarbonisation technologies supply chain in Europe.

Under this topic, it is envisaged to include support for the recovery and upgrading of industrial infrastructure in Ukraine, and for this reason at least one proposal meeting the

³² [Hubs4Circularity \(h4c-community.eu\)](https://hubs4circularity.eu/), [Horizon Europe strategic plan 2025-2027-KI0223326ENN.pdf](#) (page 94)

criteria set out in the specific conditions will be funded. However, it is not mandatory to include such support in a proposal.

This topic implements the co-programmed European partnership Processes4Planet.

HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-36: Safe and clean processing technologies and products (Processes4Planet partnership) (RIA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 24.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-6 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ³³ .
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome: Energy Intensive industries will benefit from the following outcomes:

³³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Reduce the use of hazardous substances in production processes and materials that pose a risk for human- and environmental health and safety, and ensure the avoidance of their proliferation into products;
- Enable novel processing technologies and materials with reduced health, safety, and environmental impacts;
- Increased knowledge on the industrial emission releases when it comes to emerging and less known groups of hazardous pollutants not regulated at EU level;
- Reduce the occupational exposure risk and negative health impacts at work by empowering employees;
- Contribute to the clean air and potentially biodiversity objectives, through the outcomes above.

Scope: Whereas the release of pollutants by European industry has generally decreased during the last decade, and it is expected to continue to do so, industry still contributes significantly to the emission of many pollutants into the European environment. Pollution harms our health and our environment. In addition to affecting people's health, pollution is one of the main reasons for the loss of biodiversity. Moreover, only emissions of historically important pollutants are reported by industry. Information on emerging and less known pollutants, especially those not regulated by the Industrial Emissions Directive, and related methods of monitoring is lacking. GHG emissions from industry are not included in the scope of this topic. Pollutant emissions to air, water and soil are considered.

Proposals under this topic should address all of the following:

- Demonstrate the reduction of the use of hazardous substances that pose a risk for human- and environmental health and safety and thereby also their proliferation into the products;
- Develop novel processing technologies leading to reduced health, safety and environmental impacts beyond CO₂ emissions;
- Minimise adverse effects from the novel processes' technologies on the function and durability of the materials, recyclability, the production cost as well as the associated risk;
- Where relevant, develop sampling and monitoring methods for emerging pollutants and less known groups of pollutants in stack emissions before entering the environment.

Proposals should include techno-economic and life-cycle assessment considerations of the overall process. They should consider involving all the relevant actors in a participatory approach for the reduction of risk and health issues at work.

Research should build on existing standards, or if relevant, contribute to standardisation, especially when addressing pollutants that lack robust monitoring methods. Where relevant, interoperability for data sharing should be addressed.

Proposals submitted under this topic should include a business case and exploitation strategy as outlined in the introduction to this Destination.

If selected for funding, projects are encouraged to build on, or seek collaboration, with existing projects and develop synergies with other relevant European, national, or regional initiatives and funding programmes. Where relevant, projects are encouraged to take advantage of European research infrastructures and services in the areas of analytical research infrastructures such as the ones in the ARIE network³⁴ or environment, health and food³⁵. Projects are moreover encouraged to inform the European Commission's Joint Research Centre (JRC) of their work plan to foster coordination with on-going science-for-policy related activities in the European Commission.

International cooperation is encouraged.

This topic implements the co-programmed European partnership Processes4Planet.

HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-38: Synergies and mutual learning with national and regional initiatives in Europe on Industrial decarbonisation (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the

³⁴ <https://arie-eu.org/>

³⁵ <https://ri-portfolio.esfri.eu/>

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ³⁶ .
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Expected Outcome:

- Increased cooperation across Member States and Associated Countries related to European, national and regional initiatives in the field of decarbonisation of energy - intensive industries in the context of a R&I deployment agenda.
- Support the implementation of the part on accelerating the decarbonisation of energy-intensive industries of the ERA Action on “*Accelerating R&I investments for Europe’s industrial Transformation and Competitive Sustainability*” featuring in the 2025-2027 ERA Policy Agenda.
- Exchange of best practices across Member States and Associated Countries on industrial decarbonisation projects and initiatives under the ERA Action and in the context of a R&I deployment agenda.
- Contribute to the Coordination of actions under the ERA Action and relevant work streams under the SET-Plan.
- Facilitate the development of new and update of existing national and regional industrial decarbonisation roadmaps, strategies, and action plans on energy intensive industries of countries participating in the ERA Action as well as under the SET Plan.
- Make available relevant national and regionally funded projects on the European Innovation Centre for Industrial Transformation and Emissions (INCITE)-Platform in line with a methodology developed by the Joint Research Centre in cooperation with other Commission services.

Scope: The governance of the action should be under the authority of national and regional governments and relevant public bodies who are responsible for national and regional policies, strategies and programmes addressing energy intensive industries.

Proposals should support the coordination of national and regional public authorities’ funding of research, innovation, acceleration of public/private R&I and deployment of technologies for the energy intensive industries’ decarbonisation. It should be aligned with the policies rolled out under the Clean Industrial Deal. The proposals should take into account and build on the Mutual Learning Exercise on Industrial Decarbonisation³⁷.

Coordination and support activities should address all of the following:

³⁶ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

³⁷ [Mutual Learning Exercise on Industrial decarbonisation | Research and Innovation \(europa.eu\)](#)

- Promote and organise active networking, exchanges of information and mutual learning and the application of a whole-of-government approach, involving national and regional authorities.
- Build an overview of national and regional technology roadmaps, strategies, and action plans on industrial decarbonisation.
- Compare this overview to relevant work at European level, including the ERA Industrial Technology Roadmap for low carbon technologies in energy-intensive industries, the updated SRIAs of the Processes4Planet and Clean Steel Partnerships, activities under the Innovation Funds, the SET-Plan, and the Net Zero Industry Act (and its and implementing acts), as well as the 2020 Taxonomy Regulation and its implementation as regards climate mitigation³⁸.
- Build and exchange knowledge and expertise in national and regional industrial decarbonisation roadmapping for low-carbon technologies in energy-intensive industries; and develop monitoring tools and identify indicators to monitor progress.
- Promote the valorisation of knowledge and results of EU, national and regional projects, in line with the Council conclusions³⁹ on knowledge valorisation of 23 May 2024.
- Implement the action through analytical work, providing information and data, workshops to facilitate collaboration among countries participating under the energy intensive industry part of the ERA Action and relevant working parties under the SET Plan among others.

HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-39: Towards human-centric, sustainable and resilient energy-intensive industries (Processes4Planet and Clean Steel partnerships) (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant</i>	The rules are described in General Annex G. The following exceptions apply:

³⁸ Commission Delegated Act 2021/2139 as regards the relevant parts of section 3 on manufacturing
³⁹ <https://data.consilium.europa.eu/doc/document/ST-10182-2024-INIT/en/pdf>

<i>Agreements</i>	Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁴⁰ .
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Expected Outcome: Proposals should contribute to the following outcomes:

- Facilitate radical workplace innovation, optimising human-machine interactions and capitalising on the added value of human workers via digital technologies;
- Contribute to the development of innovative technologies in a human-centric way while reducing the risk and negative health impacts at work;
- Incorporate new breakthrough technologies and realise new production processes with respect to human-centric design, environmental- and societal impacts and resilience;
- Improve the capacities of actors to integrate Industry 5.0 (human-centricity, sustainability, and resilience) in the technological development processes by at the same time increasing the competitiveness of the industry.

Scope: Industry 5.0 recognises the power of industry to achieve societal goals beyond jobs and growth to become a resilient provider of prosperity. It focuses on making production respect the boundaries of our planet improving competitiveness of European process industries and placing the wellbeing of the industrial worker at the centre of the production process, while increasingly embracing digital and green technologies to remain the solution provider for all Europeans.

Coordination and support activities should address all of the following:

- Prepare an overview of the state of the preconditions for adding the Industry 5.0 perspective to energy intensive industries - this includes human-centric, gender-specific, resilience and sustainability aspects;
- Map technologies (e.g., industrial wearable, human digital twin, extended reality) integrating individual competences and increasing usability, specifically applicable to energy intensive industries sectors and processes. For example, technologies i) supporting the co-design of processes and workplaces, enhancing the remote monitoring experience and creating new capabilities for operating; ii) supporting new forms of human-machine interaction by providing real-time feedback on personal performance

⁴⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

and holistic intuitive workplace interfaces; or iii) co-designed in accordance with user expectations and the integration of workplace experience;

- Explore through a practical assessment how the process automation technologies currently in use in Process Industries are making use of innovative the industry 5.0 technologies (the practical assessment is expected to cover several companies and at least five industry sectors);
- Develop an Industry 5.0 framework and engage with a wide range of stakeholders including labour authorities and ongoing relevant sectoral social dialogues at European level. This should include empower employees in a participatory approach for adding the industry 5.0 dimension to the industrial processes including the reduction of risk and health issues;
- Dissemination and communication of information and knowledge to stakeholders including industry, policy makers, research and education actors, civil society and general public;
- Proposals should specifically address gender, age, and disability considerations, recognising potential variations in technological adoption and impact across diverse demographic groups.

This topic implements the co-programmed European partnerships Processes4Planet and Clean Steel partnerships.

Social Circular Enterprises

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-05-TWIN-TRANSITION-21-two-stage: Demonstrators for clusters of social circular enterprises (IA)

Call: INDUSTRY two-stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply: Applicants submitting a proposal under the blind evaluation pilot (see

	General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁴¹.</p>

Expected Outcome: Social Circular Enterprises (SCEs)⁴² need to adapt to new market realities in the circular economy, driven by the search for new market opportunities (e.g. secondary raw materials market, business models addressing change in consumption awareness, and technological developments improving productivity). To achieve this adaptation, investment in R&D capacity and technology for SCEs is essential. Besides further developing its offer towards consumers, SCEs are increasingly focussing their activities towards B2B markets, such as for secondary raw materials. In that regard, SCEs started to explore the growing and labour-intensive market of sorting, recycling and upcycling services for other businesses. Research and innovation can accelerate this potential and is most needed in the area to remain competitive. Moreover, research and innovation in this sector can lever potentials beyond productivity and competitiveness, as SCEs pursue a triple impact: economic, green (contribute to a circular and resource efficient economy) and social (employment of vulnerable groups).

The following outcomes are expected for SCEs and wider circular networks:

- Improve the uptake and scale of technology solutions in individual SCE and promote shared technology development and engineering through SCE clusters.
- Improve competitiveness through enhanced productivity, as well as new market opportunities, for SCEs related to specific waste streams with potential for competitive

⁴¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁴² https://circulareconomy.europa.eu/platform/sites/default/files/social_circular_economy_2017.pdf

advantages, such as, textiles, WEEE (waste electrical and electronic equipment) and construction materials;

- Prove technical, economic, and environmental excellence of SCE in (local) circular value chains (e.g. I-US) leading to increased collaboration with (mainstream / for profit) industrial partners;
- Contribute to the reduction of non-recyclable waste generated in the region/area of the cluster by contributing to the re-using and transforming waste, by-products, and side-streams into new/secondary resources of raw materials;
- Increase employment of persons with a distance to the labour market in SCE and improve their labour productivity, for example by using assistive technology in the work process and use of data (e.g. AI trained assessment and instructions).

Scope: Social Circular Enterprises (SCEs) have been pioneers in the circular economy since decades. They are active in all stages of the circular economy and deal with various waste stream. SCEs are also known to offer new and innovative circular business models and bringing new circular services and products to the market. In the last decade SCE also entered the market of secondary raw materials by collecting and disassembling various products and goods. The majority of SCEs are SMEs and offer local employment opportunities to vulnerable groups (99%)⁴³. On average, a circular social enterprise creates 70 jobs per 1,000 tons collected with a view of being re-used.

Projects are expected to research and develop a replicable tech-oriented demonstrator(s) within social circular clusters. Within a demonstrator, partners are expected to jointly adapt, design, test and implement relevant technology solutions. The following specific activities are expected within demonstrators:

- The demonstrators are supposed to organise as a Social Circular Tech Cluster allowing to pool resources and adapt, develop and test technology solutions. This will facilitate more business opportunities (tech based spin-offs) and sharing of expertise with relevant industries.
- A demonstrator consortium should be active in at least two Member States or Associated Countries and can choose to focus on textile and construction waste or WEEE. Each demonstrator consortium exists out of two or more clusters, each grouping individual SCEs (ideally with different degrees of maturity⁴⁴), for-profit circular companies (e.g. sectoral peers in secondary raw materials industries), research, and tech centres able to support SCE with relevant technology and research capacity. SCEs should form the core of the consortia, and should benefit directly from the interventions to improve their triple impact model. Public authorities and SCE federations could engage where appropriate. Demonstrator consortia should be transnational in order to compare pilots in different markets.

⁴³ Proximity and social economy industrial ecosystem. Annual Single Market Report 2021.

⁴⁴ https://social-economy-gateway.ec.europa.eu/about-social-economy_en

- Adapting, designing and developing technologies in SCEs needs should focus on optimising efficiency⁴⁵ in management and processing of waste streams and enlarge the potential market activity of SCEs in the circular economy (WEEE, textiles and construction focus). Relevant technologies should improve the productivity and innovation capacity within SCE and consequently the market position in the secondary raw materials markets. Technologies can include data driven technologies such as AI to improve sorting knowledge and decision making (screening based on automated recognition with cost-benefit analysis), software to standardise repair operations and instructions, improve stocks management and increase reuse sales by optimising the pricing system (e.g. automated value calculation of incoming materials and goods), digital modelling tools (including material passport), etc.
- Research could also include the potential of assistive technologies to support employees (mostly persons with disabilities, specific impairments, or social disadvantages) in SCE in order to improve their productivity and wellbeing.
- Market research focussing on improving the position of SCE as an attractive partner in management and processing of waste streams (in terms of textile, WEEE and construction materials) with most potential for growth in B2B markets. For example focussing on collection, disassembly, sorting, purification, concentration, recycling, exchanging or preparation, for the valorisation of waste to be used as feedstock for other plants and companies across sectors and/or across value chains. This market research can include specific sectoral assessment of economic potential for most labour-intensive circular activities.
- By organising through clusters, demonstrators are motivated to develop shared engineering activities (labs, strategies and shared technology) to make technology accessible for enterprises with less capacity and resources and to reduce overall costs for individual SCEs.
- Where relevant, proposals are encouraged to build on, or seek collaboration with, existing projects and develop synergies with other relevant European, national or regional initiatives and funding programmes. In particular, the project could build further on relevant knowledge, tools, methods and technology developed and applied within existing H4C (Clusters for Circularity) and its knowledge platform.⁴⁶

⁴⁵ <https://rreuse.org/wp-content/uploads/2024/05/d7--findings-and-evaluation-report-01.-digital-and-social-trends-in-re-use-operations-.pdf>

⁴⁶ <https://www.h4c-community.eu/>

Destination 2: Achieving technological leadership for Europe's open strategic autonomy in raw materials, chemicals and innovative materials

The research and innovation under this Destination will contribute to a paradigm shift, as regards the availability, development, use and disposal of chemicals and materials. This is necessary to guarantee Europe's technological sovereignty and capacity to deliver on the twin green and digital transitions (it is thus strongly linked to the objectives of the Destination 'Achieving global leadership in climate-neutral, circular and digitised industrial and digital value chains').

To enable such a shift, an innovative, strong European R&I ecosystem for circular chemicals and materials is needed, working across different technology readiness levels. Bringing knowledge and skills together across the materials' value chains is key to ensuring that this shift can materialise.

The requirements of the European Green Deal for safety, sustainability and circularity should be considered across the life cycle of a chemical or material. The 2022 Commission Recommendation on 'Safe and Sustainable by Design' (SSbD) sets out a new framework on how to achieve these objectives.

R&I activities should contribute to strengthen EU's critical raw materials capacities along all stages of the value chain, increasing our resilience by reducing dependencies, increasing preparedness and promoting supply chain sustainability and circularity, in line with the Critical Raw Materials Act. It is necessary to improve the energy and process efficiency of extractive and processing activities and minimise their environmental impact, including GHG emissions. Advancements need to be made on finding options for replacing critical raw materials with other (advanced) materials offering at least the same functionality and taking into account the existing environmental concerns.

Advanced materials (including amongst others nano- and 2D materials) and chemicals are designed with functionality in mind. Compared to conventional materials, they have novel properties that significantly step-up performance. New digital tools are needed such as common data spaces, digital twins, industrial virtual worlds, as well as novel (autonomous) design, synthesis, development, characterisation and fabrication tools as well as continuous training of scientists on these new tools.

To secure unimpeded market entry, appropriate test methods are needed. New chemicals and materials should be developed using the SSbD framework and with the efficiency and circularity of materials in mind, also for their inclusion in products. This calls for tools, models and data for robust SSbD, including animal-free new approach methodologies and systematic life-cycle assessments. Bio-based advanced materials/chemicals and the integration and interaction of biological and artificial materials and components offer new opportunities to reduce resource dependencies and maintain sustainability.

Achieving the circularity of both raw materials and advanced materials is a key future challenge. Establishing new material flows, recovery, recycling and upcycling of materials

from waste are challenges in themselves, but they also require information sharing along and across value chains and development of new business models allowing to foster innovative solutions related to technological progress, such as in materials design.

Uptake of advanced materials as well as a more efficient use of materials should be fostered in product and materials-based technology developments. This also requires new business models to be developed for the deployment of circular technologies and value chains as well as for providing product-as-a-service models, on-demand manufacturing, take-back-schemes and other service-based businesses. Strong support to SMEs is required so they can thrive in this materials ecosystem.

Business cases and exploitation strategies for industrialisation:

This section applies only to those topics in this Destination, for which proposals should demonstrate the expected outcomes by including a *business case and exploitation strategy for industrialisation*.

A business case and a credible initial exploitation strategy are essential components in the ultimate success of an industry-based project, as well as its prospects to attract further investments for deployment. They will both be decisive factors under the impact criterion, and proposers are encouraged to use the extended page limit to present a carefully considered business case and exploitation strategy, backed by the management of the companies involved.

The *business case* should demonstrate the expected impact of the proposal in terms of enhanced market opportunities for the participants and deployment in the EU, in the short to medium term. It should describe the targeted market(s); estimated market size in the EU and globally; user and customer needs; and demonstrate that the solutions will match the market and user needs in a cost-effective manner; and describe the expected market position and competitive advantage.

The *exploitation strategy* should identify obstacles, requirements and necessary actions involved in reaching higher TRLs (Technology Readiness Levels), for example: securing the required investments, including through possible synergies with other programmes; accessing the required skills; matching value chains; enhancing product robustness; securing industrial integrators; and user acceptance.

For TRLs 6 and 7, a credible strategy to achieve future full-scale deployment in the EU is expected, indicating the intentions of the industrial partners after the end of the project.

Where relevant, in the context of **skills**, it is recommended to develop training material to endow workers with the right skillset in order to support the uptake and deployment of new innovative products, services, and processes developed in the different projects. This material should be tested and be scalable, and can potentially be up-scaled through the European Social Fund Plus (ESF+). This will help the European labour force to close the skill gaps in the relevant sectors and occupational groups and improve employment and social levels across the EU and associated countries.

For topics in this destination, consortia (if selected for funding) could consider **voluntary contributions in terms of data, indicators and knowledge to relevant Joint Research Centre (JRC) platforms** for capitalising the knowledge developed in their projects and become more policy relevant:

- INnovation Centre for Industrial Transformation and Emissions (INCITE) (<https://innovation-centre-for-industrial-transformation.ec.europa.eu/>).
- The Energy and Industry Geography Lab: EIGL (<https://energy-industry-geolab.jrc.ec.europa.eu/>).

Innovation Actions — Legal entities established in China are not eligible to participate in Innovation Actions in any capacity. Please refer to the Annex B of the General Annexes of this Work Programme for further details.

Raw Materials

Proposals are invited against the following topic(s):

HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-61: Technologies for critical raw materials and strategic raw materials from end-of-life products (IA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 24.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>To increase EU resilience in raw materials supply chains and thus reduce the serious risk to the Union's strategic assets, economic and societal interests, autonomy and security associated with the current EU reliance on a few third countries for critical raw materials, by increasing sustainable and responsible sourcing of primary and secondary raw materials necessary to enable the green and digital transition and in</p>

	<p>alignment with the objectives of the Critical Raw Materials Act⁴⁷, participation in this topic is limited to legal entities established in Member States, associated countries, OECD countries, African Union Member States, MERCOSUR, CARIFORUM, Andean Community and countries with which the EU has concluded strategic partnerships on raw materials⁴⁸ as well as trade agreements (or association/economic partnership or equivalent agreements, including the new Clean Trade and Investment Partnerships) containing raw materials cooperation provisions (i.e. Energy and Raw materials chapters)⁴⁹. The choice of these countries was made taking into consideration the development of strategic international partnerships on raw materials and avoidance of reinforcing existing over-dependencies, as well as the importance of involving partners committed to pursuing open trade in such materials.</p> <p>Proposals including legal entities which are not established in the countries that fall under the criteria above will be ineligible.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome: The projects' outcomes will enable the expected impacts of the destination by increasing supply security and access to secondary raw materials, in particular critical and strategic raw materials for EU⁵⁰ industrial value chains and strategic sectors which will alleviate critical raw materials dependency.

⁴⁷ Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 ([OJ L, 2024/1252, 3.5.2024, ELI: http://data.europa.eu/eli/reg/2024/1252/oj](https://eur-lex.europa.eu/eli/reg/2024/1252/oj)).

⁴⁸ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en

⁴⁹ https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/negotiations-and-agreements_en

⁵⁰ Annex I and II, Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and

Projects are expected to contribute to the following outcomes:

- Increased recovery rate of critical and strategic raw materials as set out in the Critical Raw Materials Act⁵¹ through developing raw materials recycling and re-use of components and/or products from end-of-life (EoL) products, including recovery of raw material by-products.
- Improved competitiveness of secondary raw materials production by enhancing cost effectiveness.
- Improved efficiency of technologies for separation and recycling and the sustainable embedment of the process in terms of energy, resource and water use, waste and emissions (including Green House Gases and air pollutants) footprint.
- Improved responsible supply of raw materials to Europe from EoL streams in line with the EU principles for sustainable raw materials,⁵² which are a non-regulatory set of principles based on the EU acquis. They set out requirements for sustainable raw materials and extraction and processing in Europe in terms of social, environmental and economic performance.
- Actions are expected to contribute to the implementation of the EU Critical Raw Materials Act⁵³.

Scope:

- Actions should develop material efficient high-quality re-use and recycling of one or more of the following end-of-life product categories/key waste streams: waste electrical and electronic equipment (WEEE), waste batteries, end-of-life vehicles, waste wind turbines, waste solar photovoltaics, waste heat pumps, waste electrolyzers and machine tools made from high-performance alloys.
- Actions should focus on the whole chain of re-using and recycling processes and procedures – from collection, logistics, characterisation, sorting, cleaning, refining and purification of secondary raw materials and quality of produced outputs.
- Actions should focus on functional re-use and recycling. Recycling where the recycled material is of lower functionality than the original material (downcycling) is to be avoided.

amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 ([OJ L, 2024/1252, 3.5.2024, ELI: <http://data.europa.eu/eli/reg/2024/1252/oj>](#)).

⁵¹ Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 ([OJ L, 2024/1252, 3.5.2024, ELI: <http://data.europa.eu/eli/reg/2024/1252/oj>](#)).

⁵² European Commission. Directorate General for Internal Market, Industry, Entrepreneurship and SMEs. (2021). EU principles for sustainable raw materials. Publications Office. <https://doi.org/10.2873/12856>

⁵³ To be updated after publication in the Official Journal

- Actions should envisage clustering activities with other projects aiming at recycling, second life, re-use, repurposing, remanufacturing of products and/or components relevant selected projects for cross-projects co-operation, consultations and joint activities on cross-cutting issues and share of results as well as participating in joint meetings and communication events. To this end proposals should foresee a dedicated work package and/or task, and earmark the appropriate resources accordingly.
- Actions should facilitate the market uptake of solutions developed through industrially- and user-driven multidisciplinary consortia covering the relevant value chain and should consider standardisation aspects when relevant. The action should also include the analysis of financial opportunities ensuring the market exploitation and replication of the circular business model behind the developed solutions as new processes, products and/or services.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination.

In this topic the integration of the gender dimension (sex and/or gender analysis) in research and innovation content is not a mandatory requirement, however, should you consider it to be of relevance for your specific proposal, you are strongly encouraged to do it.

HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-62: Strategic Partnerships for Raw Materials: Innovative Approaches for sustainable production of Critical Raw Materials (IA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>To increase EU resilience in raw materials supply chains and thus reduce the serious risk to the Union's strategic assets, economic and societal interests, autonomy and security associated with the current EU reliance on a few third countries for critical raw materials, by increasing sustainable and responsible sourcing of primary and secondary raw materials</p>

	<p>necessary to enable the green and digital transition and in alignment with the objectives of the Critical Raw Materials Act⁵⁴, participation in this topic is limited to legal entities established in Member States, associated countries, OECD countries, African Union Member States, MERCOSUR, CARIFORUM, Andean Community and countries with which the EU has concluded strategic partnerships on raw materials⁵⁵ as well as trade agreements (or association/economic partnership or equivalent agreements, including the new Clean Trade and Investment Partnerships) containing raw materials cooperation provisions (i.e. Energy and Raw materials chapters)⁵⁶. The choice of these countries was made taking into consideration the development of strategic international partnerships on raw materials and avoidance of reinforcing existing over-dependencies, as well as the importance of involving partners committed to pursuing open trade in such materials.</p> <p>Proposals including legal entities which are not established in the countries that fall under the criteria above will be ineligible.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>Due to the scope of this topic, legal entities established in countries with which the EU has established strategic partnerships for raw materials⁵⁷ are exceptionally eligible for Union funding.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Procedure</i>	The procedure is described in General Annex F. The following

⁵⁴ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 ([OJ L 2024/1252](https://eur-lex.europa.eu/eli/reg/2024/1252/oj), 3.5.2024, ELI: <http://data.europa.eu/eli/reg/2024/1252/oj>).

⁵⁵ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en

⁵⁶ https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/negotiations-and-agreements_en

⁵⁷ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 ([OJ L 2024/1252](https://eur-lex.europa.eu/eli/reg/2024/1252/oj), 3.5.2024, ELI: <http://data.europa.eu/eli/reg/2024/1252/oj>).

	<p>exceptions apply:</p> <p>To ensure a balanced portfolio covering the four different groups mentioned in the scope below, grants will be awarded to applications not only in order of ranking but also to at least the highest ranked proposal within each group, provided that the applications attain all thresholds.</p>
<i>Exceptional page limits to proposals/applications</i>	<p>In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.</p>

Expected Outcome: Projects outcomes will enable the expected impacts of the destination by increasing supply security and access to more sustainable produced primary raw materials and secondary raw materials, in particular critical and strategic raw materials for EU⁵⁸ industrial value chains and strategic sectors.

Projects are expected to contribute to the following outcomes:

- Strengthen EU cooperation with countries the EU established strategic partnerships on Raw Materials⁵⁹;
- Improved industrial viability, safety and environmental impacts of the operation in a way that leads to measurable improvements;
- Improved diversification of EU sourcing of critical raw materials from third countries;
- Improved responsible supply of raw materials to Europe in line with the EU principles for sustainable raw materials⁶⁰, which are a non-regulatory set of principles based on the EU acquis. They set out requirements for sustainable raw materials and extraction and processing in Europe in terms of social, environmental and economic performance.
- Dissemination and exploitation of projects outputs is tailored for organisations and industry dealing with raw materials in the EU and project partner from Strategic partnership countries.
- Promote the utilisation of UNFC (United Nations Framework Classification for Resources) and UNRMS (United Nations Resource Management System) in the raw materials sector.

⁵⁸ Annex 1 and Annex 2, Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 (OJ L, 2024/1252, 3.5.2024, [http](http://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en)).

⁵⁹ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en

⁶⁰ European Commission. Directorate General for Internal Market, Industry, Entrepreneurship and SMEs. (2021). EU principles for sustainable raw materials. Publications Office. <https://doi.org/10.2873/12856>

- Actions are expected to contribute to the implementation of the EU Critical Raw Materials Act⁶¹.

Scope: Proposals should:

- Develop and demonstrate extraction, processing or refining technologies in order to facilitate and increase recovery in exploitation of primary critical raw materials (minerals and metals only). The proposals have to demonstrate (measure and assess) reduced environmental and social impact. Proposals can include additional exploration aspects if duly justified.
- Justify the relevance of all targeted minerals and metals. Priority are the EU critical raw materials. Sea mining is not within the scope of this topic.
- Collaborate with countries with which the EU has signed Strategic Partnerships on Raw Materials.⁶²
- Collaborate with one selected Strategic Partnership country out of the four groups: Group 1 (Argentina, Chile), Group 2 (Democratic Republic of the Congo, Namibia, Rwanda, Zambia), Group 3 (Kazakhstan, Serbia, Uzbekistan), Group 4 (Australia, Greenland). Group 4 can be extended to countries which will sign strategic partnerships for raw materials before the deadline for applications. The consortia should include raw materials industry from the targeted country in the focussed group, as well as downstream users from the EU. Proposals are expected to focus on one out of four groups.
- Demonstrate technology on mineral resources of the targeted partner country. The environmental (including GHG and other air pollutant emissions, water, soils, biodiversity) and social impacts of technology should be duly measured and assessed.
- Envisage clustering activities with other relevant selected projects for cross-projects co-operation, consultations and joint activities on cross-cutting issues and share of results as well as participating in joint meetings and communication events. To this end proposals should foresee a dedicated work package and/or task, and earmark the appropriate resources accordingly.
- Facilitate the market uptake of solutions developed through industry- and user-driven multidisciplinary consortia covering the relevant value chain and should consider standardisation aspects if relevant. The action should also include the analysis of financial opportunities ensuring the market exploitation and replication of the circular

⁶¹ Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 (OJ L, 2024/1252, 3.5.2024, ELI: <http://data.europa.eu/eli/reg/2024/1252/oj>).

⁶² https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en

business model behind the developed solutions as new processes, products and/or services.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination.

In this topic the integration of the gender dimension (sex and/or gender analysis) in research and innovation content is not a mandatory requirement, however, should you consider it to be of relevance for your specific proposal, you are strongly encouraged to do it.

HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-63: Innovative solutions for the sustainable production for Semiconductor raw materials (IA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 24.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>To increase EU resilience in raw materials supply chains and thus reduce the serious risk to the Union's strategic assets, economic and societal interests, autonomy and security associated with the current EU reliance on a few third countries for critical raw materials, by increasing sustainable and responsible sourcing of primary and secondary raw materials necessary to enable the green and digital transition and in alignment with the objectives of the Critical Raw Materials Act⁶³, participation in this topic is limited to legal entities established in Member States, associated countries, OECD countries, African Union Member States, MERCOSUR, CARIFORUM, Andean Community and countries with which the EU has concluded strategic partnerships on raw materials⁶⁴</p>

⁶³ Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 ([OJ L, 2024/1252, 3.5.2024, ELI: http://data.europa.eu/eli/reg/2024/1252/oj](https://eur-lex.europa.eu/eli/reg/2024/1252/oj)).

⁶⁴ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en

	<p>as well as trade agreements (or association/economic partnership or equivalent agreements, including the new Clean Trade and Investment Partnerships) containing raw materials cooperation provisions (i.e. Energy and Raw materials chapters)⁶⁵. The choice of these countries was made taking into consideration the development of strategic international partnerships on raw materials and avoidance of reinforcing existing over-dependencies, as well as the importance of involving partners committed to pursuing open trade in such materials.</p> <p>Proposals including legal entities which are not established in the countries that fall under the criteria above will be ineligible.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome: Projects outcomes will enable achieving the expected impacts of the destination by increasing access to primary raw materials and secondary raw materials, in particular critical raw materials for EU⁶⁶ industrial value chains and strategic sectors.

Projects are expected to contribute to the following outcomes:

- Decreased dependency of the EU on imported raw materials for semiconductor production and decreased risk in European semiconductor supply chains. The actions targeting strategic raw materials⁶⁷ should contribute to the benchmarks as set out in the

⁶⁵ https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/negotiations-and-agreements_en

⁶⁶ Annex 2, Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 ([OJ L, 2024/1252, 3.5.2024, ELI:https://data.europa.eu/eli/reg/2024/1252/oj](#)).

⁶⁷ Annex 1, Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 ([OJ L, 2024/1252, 3.5.2024, ELI:https://data.europa.eu/eli/reg/2024/1252/oj](#)).

Critical Raw Materials Act⁶⁸.

- Raw materials for semiconductors competitively produced and refined in the EU in a sustainable and socially acceptable way improving the competitiveness of European industry.
- Increase recovery rates of particularly raw materials from low grade or complex ores and/or from residues and/or by-products and/or extractive waste and/or manufacturing waste.
- Increase the competitiveness and sustainability of mineral processing and refining processes in terms of cost-effectiveness, higher material-, water-, energy-efficiency, emission reduction and flexibility. This may also include the development of more sustainable solvents, reagents, and low-carbon manufacturing processes.
- Foster collaboration among industry stakeholders along the value chain, research institutions, and technology providers to accelerate the development and adoption of sustainable production solutions.
- Improve responsible supply of raw materials to Europe in line with the EU principles for sustainable raw materials⁶⁹, which are a non-regulatory set of principles based on the EU acquis. They set out requirements for sustainable raw materials and extraction and processing in Europe in terms of social, environmental, and economic performance.

Scope: Actions should focus on raw materials for semiconductors necessary for the green and digital transition and strategic sectors, such as for example aero-space; including one or more of the following raw materials: antimony, arsenic, bismuth, boron, gallium, germanium, indium, selenium, silicon, tellurium.

Actions should facilitate the market uptake of solutions developed through industrially- and user-driven multidisciplinary consortia covering the relevant value chain from extraction to the production of semiconductor grade raw materials and alloys, as well as relevant downstream industry. Standardisation aspects should be considered when relevant.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination. For TRLs 6-7, a credible strategy to achieve future full-scale deployment in the EU and encourage long-term industrial collaboration is expected, indicating the intentions of the industrial partners after the end of the project.

Actions should envisage clustering activities with other relevant selected projects for cross projects co-operation, consultations and joint activities on cross-cutting issues and share of

⁶⁸ Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 ([OJ L, 2024/1252, 3.5.2024, ELI:https://eur-lex.europa.eu/eli/reg/2024/1252/oj](https://eur-lex.europa.eu/eli/reg/2024/1252/oj)).

⁶⁹ European Commission. Directorate General for Internal Market, Industry, Entrepreneurship and SMEs. (2021). EU principles for sustainable raw materials. Publications Office. <https://doi.org/10.2873/12856>

results as well as participating in joint meetings and communication events. To this end proposals should foresee a dedicated work package and/or task, and earmark the appropriate resources accordingly.

Actions should also contribute to improving the awareness of relevant external stakeholders and the general public across the EU about the importance of raw materials for society, the challenges related to their supply within the EU and about proposed solutions which could help to improve society's acceptance of and trust in sustainable raw materials production in the EU.

In this topic the integration of the gender dimension (sex and/or gender analysis) in research and innovation content is not a mandatory requirement, however, should you consider it to be of relevance for your specific proposal, you are strongly encouraged to do it.

HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-64: EU Co-funded Partnership on raw materials for the green and digital transition (Co-funded partnership Raw Materials for the Green and Digital Transition)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 90.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 90.00 million.
<i>Type of Action</i>	Programme Co-fund Action
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>To increase EU resilience in raw materials supply chains and thus reduce the serious risk to the Union's strategic assets, economic and societal interests, autonomy and security associated with the current EU reliance on a few third countries for critical raw materials, by increasing sustainable and responsible sourcing of primary and secondary raw materials necessary to enable the green and digital transition and in alignment with the objectives of the Critical Raw Materials Act⁷⁰, participation in this topic is limited to legal entities established in Member States, associated countries, OECD countries, African Union</p>

⁷⁰ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 ([OJ L 2024/1252](https://eur-lex.europa.eu/eli/reg/2024/1252/oj), 3.5.2024, ELI: <http://data.europa.eu/eli/reg/2024/1252/oj>).

	<p>Member States, MERCOSUR, CARIFORUM, Andean Community and countries with which the EU has concluded strategic partnerships on raw materials ⁷¹ as well as trade agreements (or association/economic partnership or equivalent agreements, including the new Clean Trade and Investment Partnerships) containing raw materials cooperation provisions (i.e. Energy and Raw materials chapters)⁷². The choice of these countries was made taking into consideration the development of strategic international partnerships on raw materials and avoidance of reinforcing existing over-dependencies, as well as the importance of involving partners committed to pursuing open trade in such materials.</p> <p>Proposals including legal entities which are not established in the countries that fall under the criteria above will be ineligible.</p> <p>The coordinator role of the action is limited to public institutions being R&I programme owners or funders.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>Due to the scope of this topic, legal entities established in countries with which the EU has established strategic partnerships for raw materials⁷³, as well as in countries which were participating in ERAMIN ³⁷⁴, are exceptionally eligible for Union funding.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The EUR 60 000 threshold provided for in Article 208(a) of the Financial Regulation No 2024/2509 does not apply, as financial support provided by the participants to third parties is one of the primary activities of this action in order to be able to achieve its objectives. The maximum amount of FSTP to be granted to an individual third party is EUR 8 million.</p>

⁷¹ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en

⁷² https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/negotiations-and-agreements_en

⁷³ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 ([OJ L 2024/1252](https://eur-lex.europa.eu/eli/reg/2024/1252/oj), 3.5.2024, ELI: <http://data.europa.eu/eli/reg/2024/1252/oj>).

⁷⁴ <https://www.era-min.eu/about-era-min-3>

	The funding rate is 30% of the eligible costs.
<i>Total indicative budget</i>	The total indicative budget for the topic is EUR 90 million committed in annual instalments in the years 2025 and 2027 (EUR 45 million from the 2025 budget and EUR 45 million from the 2027 budget).

Expected Outcome: Projects outcomes will enable achieving the expected impacts of the destination by increasing supply security and access to primary and secondary raw materials, in particular critical and strategic raw materials⁷⁵ for EU industrial value chains and strategic sectors.

Projects are expected to contribute to the following outcomes:

- Align national R&I priorities in raw materials with EU policy on raw materials.
- Strengthen EU cooperation with countries the EU established strategic partnerships on Raw Materials⁷⁶;
- Improve industrial viability, safety and environmental impacts of the operation in a way that leads to measurable improvements;
- Improve EU sourcing diversification of critical raw materials from third countries;
- Improve responsible supply of raw materials to Europe in line with the EU principles for sustainable raw materials⁷⁷, which are a non-regulatory set of principles based on the EU acquis. They set out requirements for sustainable raw materials and extraction and processing in Europe in terms of social, environmental and economic performance.
- Dissemination and exploitation of projects outputs is tailored for organisations and industry dealing with raw materials in the EU and project partner from Strategic partnership countries.
- Promote the utilisation of UNFC (United Nations Framework Classification for Resources) and UNRMS (United Nations Resource Management System) in the raw materials sector.
- Actions are expected to contribute to the implementation of the EU Critical Raw Materials Act⁷⁸, particularly to the 2030 benchmarks.

⁷⁵ Annex 1 and Annex 2, Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 ([OJ L, 2024/1252, 3.5.2024, ELI:https://eur-lex.europa.eu/eli/reg/2024/1252/oj](https://eur-lex.europa.eu/eli/reg/2024/1252/oj)).

⁷⁶ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en

⁷⁷ COM(2023) 165 - A secure and sustainable supply of critical raw materials in support of the twin transition

⁷⁸ Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and

Scope:

- The objective of the European Partnership on Raw Materials is to strengthen the co-ordination of national and regional research programmes in the field of non-energy and non-agricultural raw materials, ensuring common understanding of R&I challenges to achieve the objectives of the Critical Raw Materials Act⁷⁹.
- The Partnership will build on the experience of ERA-NETs: ERA-MIN, ERA-MIN 2 and ERA-MIN 3. The Partnership should cover the whole raw materials value chain including exploration, extraction, processing technologies, and recycling and improve circularity. Sea mining is excluded from this topic.
- Proposals should pool the necessary financial resources from the participating national (or regional) research programmes with a view to implementing joint annual calls for proposals resulting in grants to third parties with EU co-funding in this area. Financial support provided by the participants to third parties is one of the primary activities of this action in order to be able to achieve its objectives.
- As specified in the eligibility conditions, the Partnership is open to all EU Member States, associated countries to Horizon Europe, OECD countries, African Union Member States⁸⁰, MERCOSUR, CARIFORUM, Andean Community and countries with which the EU has concluded strategic partnerships on raw materials⁸¹ as well as trade (or association/economic partnership or equivalent) agreements containing raw materials cooperation provisions (i.e. Energy and Raw materials chapters)⁸². Participation remains open to those wanting to join during the Partnership's lifetime.
- Beneficiaries should preferably be national, regional or local institutions responsible for programming research and innovation activities in raw materials. To ensure alignment of R&I activities and raw materials policy participation is also additionally open to relevant Ministries and public institutions responsible for raw materials and R&I policy.
- This Partnership should be implemented through a joint programme of activities ranging from research to coordination and networking activities, including training, demonstration, piloting and dissemination activities, to be structured along the following main building blocks:
 - o Joint annual calls for R&I activities;

amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 (OJ L, 2024/1252, 3.5.2024, ELI: <http://data.europa.eu/eli/reg/2024/1252/oj>).

⁷⁹ Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 (OJ L, 2024/1252, 3.5.2024, ELI: <http://data.europa.eu/eli/reg/2024/1252/oj>).

⁸⁰ *African Union member states* includes countries whose membership has been temporarily suspended
⁸¹ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en

⁸² https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/negotiations-and-agreements_en

- o Facilitating further uptake and commercialisation of developed R&I results;
 - o Clustering of projects and synthesising of R&I results;
 - o Coordinating research programmes between EU and its Member States and participating third countries and trigger combined action;
 - o Serving as a centre for knowledge on partner countries' R&I programmes and activities in raw materials.
- Actions should also provide measures contributing to the objectives of the Critical Raw Materials Act⁸³ and of EU raw materials policy.
 - Partners are expected to provide financial and/or in-kind contribution, in line with the level of ambition of the proposed measures. The partnership should be open to including new partners over the lifetime of the partnership. Its governance should create a clear and transparent process for engaging with a broad range of stakeholders, together with the full members of the partnership, to ensure that the work strategically covers a wide range of views in the field of biodiversity, nature-based solutions and ecosystem services throughout the lifetime of the partnership. To ensure that all work streams are coherent and complementary, and to leverage knowledge investment potential, the partnership is expected to foster close cooperation and synergies with the projects funded under Cluster 4 Digital, Industry and Space. It should also develop synergies with other relevant European initiatives, funding programmes and platforms such as EIT Raw Materials.
 - Financial support provided by the participants to third parties is one of the primary channels under this action to enable the partnership to achieve its objectives. The maximum amount to be granted to each third party is EUR 2 million. It is expected that the partnership organises joint calls on an annual base from 2026 to 2032 and therefore it should factor ample time to run the co-funded projects.
 - The total indicative budget for the partnership is EUR 300 million. The EU contribution will be limited to 30% of the total eligible costs of the action with a maximum of EUR 90 million.

The starting date of grants awarded under this topic may be as of the submission date of the application. Applicants should justify the need for a retroactive starting date in their application. Costs incurred from the starting date of the action may be considered eligible.

Innovative Advanced Materials

Proposals are invited against the following topic(s):

⁸³ Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 (OJ L, 2024/1252, 3.5.2024, ELI: <http://data.europa.eu/eli/reg/2024/1252/oj>).

HORIZON-CL4-2025-05-MATERIALS-42-two-stage: Innovative Advanced Materials (IAMs) for product monitoring, smart maintenance and repair strategies in the construction sector (RIA) (Innovative Advanced Materials for Europe partnership)

Call: INDUSTRY two-stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3 and achieve TRL 5-6 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-</p>

	2025) ⁸⁴ .
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome: Projects are expected to contribute to the following outcomes:

- Support the implementation of the Commission Communication on Advanced Materials for Industrial Leadership⁸⁵.
- Break frontiers between functional and structural materials by applying monitoring applications enabling infrastructure management such as tracking, self-powering and self-sensing to reduce maintenance costs by at least 30% compared to the state-of-the-art.
- Reduce the resources (materials and energy) needed for constructions and lower environmental impacts by applying innovative advanced materials (IAMs) with improved performance of structural or functional components, combining longevity and efficiency, repairability and circularity (improving overall materials circularity by at least 30%);
- Proof of concept of the ‘safe and sustainable by design’ (SSbD) framework during the development phase of the new IAMs to avoid use of hazardous substances and lower environmental impact;
- Promote industrial uptake of IAMs by facilitating scalability and/or integration into leaner industrial production processes;
- Support acceptance of innovative construction materials for housing to achieve maximized user experience and comfort.

Scope: Extend the lifetime of materials used in the construction sector (e.g. cement, concrete, composites, technical textiles, plaster board, pipes) for which durability is often limited by poor stability and low flexibility and/or by increasingly aggressive and changing environments. Extending a products’ life (use phase) is an important pillar of a solid sustainable and circular strategy because it reduces materials demands. In addition, new materials fit for the circular economy should be easily dismantlable into reusable or recyclable components. The actual condition and functional performance of products, components and materials should be monitored and assessed and smart maintenance and repair functions implemented, ideally at the level of individual products or components. Autonomous repair

⁸⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁸⁵ COM(2024) 98 final

systems often use sensors to detect changes in the material's condition through physical principles or mechanical deformation. The smart (AI) exploitation of collected data enables real-time monitoring of the material's condition. The surfaces created in the building process are ideal for smart solutions incorporating ubiquitous electronic systems.

Proposals should develop new and/or improved IAMs that increase recyclability, circularity and safety of construction materials reducing (raw) materials consumption by:

- Increased durability and reliability and reduced maintenance requirements (e.g. self-cleaning and/or self-healing properties, self-protection, increased stress resistance and innovative protection treatments such as corrosion and/or erosion resistance, increased fatigue resistance);
- Support smart material functionalities for continuous monitoring and in-service inspections, e.g. through integrated sensors, with multifunctional features (such as asset management tracking, self-powering and/or self-sensing for several parameters).

Multidisciplinary research activities should address at least two of the following:

- Develop strategies to accelerate the time-consuming performance evaluation step to greatly reduce the times to prototyping and then to market.
- Enhance sensor capabilities for tailored solutions through IAMs with extended physical sensor functionalities for mechanical-technological traits;
- Develop self-repairing and -healing materials for complex and resource-intensive structures, receptive to digital stimuli to retroactively influence material properties and integrating autonomous repair mechanisms to enhance their reliability (such as in composites, ceramics, coatings, technical textiles etc), extend their lifespan and enabling easy recycling;
- Develop (AI based) models like digital twins to utilize high-dimensional new sensor data and generate multimodal stimuli and functionalities for customised maintenance and repair plans, extending product lifetime economically and environmentally;
- Produce and share new knowledge on underlying multi-scale and multi-physics phenomena to better understand materials behaviour during their lifetime, develop and validate methodologies and suitable models to predict materials degradation (mechanical and/or environmental) and to assess the longevity of materials, components and products through accelerated testing and functional performance verification;
- Develop IAMs fit for modular off-site processing or 3D printing onsite;

In addition, all proposals should

- Use new digital technologies including data driven approaches to push the frontiers of designing and producing IAMs with new functionalities/performance, improve materials

scalability and related processes and use analytical technologies and infrastructures to characterise the efficiency, quality and effectiveness of developed IAMs;

- Contribute to the availability of FAIR⁸⁶ data and methods for safety and sustainability assessment of IAMs and for decision-making processes (at the design, engineering and end-of-life stage of IAMs and products);
- Explore possibilities to transfer and use developed IAMs or technologies in other sectors;
- Assess safety, sustainability and circularity of all components during the entire innovation cycle as well as how to decompose and sort for enhanced recyclability of all components at the end of life, in line with the safe and sustainable by design (SSbD) framework.

Proposals need to address both the IAM development and all the supporting technologies (digital and physical) needed (not existing yet) to cover the entire value chain (material development, validation, production, processing, use and end of life). Any existing technologies that do not require development or adaptation should be mentioned in the proposal.

Proposals should involve appropriate expertise in Social Sciences and Humanities (SSH), particularly regarding the acceptance of innovative construction materials for housing for maximized user experience and comfort. This may involve a perception analysis of these materials, resulting functionalities and the development of optimization strategies.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination.

Research should build on existing standards or contribute to standardisation of technologies encompassing sensing, self-repairing or self-healing materials. Interoperability for data sharing should be addressed, in accordance with the FAIR data principles. Projects should build on, or seek collaboration with, existing projects in EU Member States and Associated Countries and develop synergies with other relevant European, national or regional initiatives, funding programmes and platforms. Where relevant, projects are encouraged to take advantage of and connecting to European analytical research infrastructures and services.

Proposals could consider the involvement of the European Commission's Joint Research Centre (JRC), whose contribution could consist of providing added value on new solutions for advanced materials in construction, including the ability to dismount and reuse, multifunctionality, smart maintenance and enhanced circularity and safety.

International cooperation is encouraged, especially with Japan.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

⁸⁶ Findable, Accessible, Interoperable, Reusable data

This topic implements the co-programmed European Partnership Innovative Advanced Materials for the EU (IAM4EU). Proposals funded under this topic are part of the partnership portfolio and are expected to develop synergies with the related stakeholder community and contribute actively to the objectives of the partnership. The different stakeholder communities in IAM4EU are encouraged to coordinate amongst and across each other and foresee adequate resources for this as well as for the overall coordination with IAM4EU in the proposals.

HORIZON-CL4-2025-05-MATERIALS-43-two-stage: Innovative Advanced Materials (IAMs) for robust, fast curing sealants and coatings for manufacturing and final assembly (IA) (Innovative Advanced Materials for Europe partnership)

Call: INDUSTRY two-stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3-4 and achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-</p>

	2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁸⁷ .
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome: Projects are expected to contribute to the following outcomes:

- Support the implementation of the Commission Communication on Advanced Materials for Industrial Leadership⁸⁸.
- Prolong lifespan and performance of components and products across sectors using IAMs-based coatings, functionalised surfaces and/or sealings to withstand specific or challenging requirements and/or harsh environments;
- Lower maintenance needs and overall reduced Cost of Ownership for essential, structural or functional components and products;
- Lower environmental impact through improved resource efficiency, reduced energy consumption, increased recyclability at end of life and/or substitution of hazardous substances.
- Proof of concept of the ‘safe and sustainable by design’ (SSbD) framework during the development phase of the new IAMs;
- Promote industrial uptake of IAMs by facilitating scalability and/or integration into leaner industrial production processes;

Scope: One of the main factors limiting the lifespan of products (and their components) is their prolonged exposure to environmental elements. The combination of different stressors and changing conditions (operational, daily, seasonal) results in accelerated aging and premature or unanticipated failures. To prevent the resulting adverse effects, protective coatings and sealings are key to provide additional protection without requiring the reassessment of the physical design of the product/component, nor the inherent properties of the parts to be coated/sealed.

Moreover, performance evaluation of coated samples to select coating solutions which meet the demands of industrial end users constitute another bottleneck in the fast development of IAM-based coatings. In addition, recyclability is often hampered by the sealants and coatings

⁸⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁸⁸ COM(2024) 98 final

used. The new IAMs-based coatings, functionalised surfaces and sealings should allow to decompose products and structures into recyclable or reusable parts.

Proposals should develop new and/or improved IAMs-based coatings, functionalised surfaces and/or sealings that improve recyclability, circularity and safety of developed materials and products, reduce (raw) materials consumption, costs of production, manufacturing and disassembly by:

- Combining multiple functionalities, e.g. fast curing and drying, self-curing, mechanical and durable robustness, protection from environmental agents (sun, rain, snow, humidity, corrosion, erosion, temperature, ...), or a combination of beneficial thermal, acoustic, magnetic, electrical and tribological properties;
- Satisfy multiple requirements across different application areas such as electronics; (renewable) energy production and storage; automotive; maritime; aviation and rail infrastructures; construction, including HVAC⁸⁹ components;

Multidisciplinary research activities should address at least two of the following:

- Develop strategies to accelerate the time-consuming performance evaluation step to greatly reduce the times to prototyping and then to market.
- Develop functionalised surfaces (directly functionalised or via coatings), which can substantially improve the integrity, efficiency and overall performance of products and can cope with sometimes extreme surface areas (small/large) and complex and/or high aspect ratio geometries requiring advanced processing and tooling;
- Design and develop new sealants and coatings that can be applied by automated processes (higher speed and precision by digitalization), cured at room temperature (no extra heating or air conditioning of large paint shops or hangars required) and with curing times reduced by at least 90% compared to the state-of-the-art (in terms of increased productivity and/or decreased energy consumption);
- Master batch synthesis of IAMs with cutting-edge properties that allow production and processing of robust, fast and/or self-curing sealants and coatings to be applied in the manufacturing and final assembly lines in industries, and transferable between sectors;
- Produce and share new knowledge on underlying multi-scale and multi-physics phenomena to better understand materials behaviour during their lifetime, develop and validate methodologies and suitable models to predict material degradation and assess release rates from coatings and sealants used in harsh environments;

In addition, all proposals should

- Use new digital technologies including data driven approaches to push the frontiers of designing and producing IAMs with new functionalities/performance, improve materials

⁸⁹ Heating, Ventilation and Air Conditioning

scalability and related processes and use analytical technologies and infrastructures to characterise the efficiency, quality and effectiveness of developed sealants, coatings or surfaces;

- Contribute to the availability of FAIR⁹⁰ data and methods for safety and sustainability assessment of IAMs and for decision-making processes (at the design, engineering and end-of-life stage of IAMs and products);
- Explore possibilities to transfer and use developed IAMs or technologies in other sectors;
- Assess safety, sustainability and circularity of all components during the entire innovation cycle as well as how to decompose and sort for enhanced recyclability of all components at the end of life, in line with the safe and sustainable by design (SSbD) framework.

Proposals need to address both the IAM development and all the supporting technologies (digital and physical) needed (not existing yet) to cover the entire value chain (material development, validation, production, processing, use and end of life). Any existing technologies that do not require development or adaptation should be mentioned in the proposal.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination.

Research should build on existing standards or contribute to standardisation of technologies for IAM-based sealings and coatings. Interoperability for data sharing should be addressed, in accordance with the FAIR⁹¹ data principles. Projects should build on, or seek collaboration with, existing projects in EU Member States and Associated Countries and develop synergies with other relevant European, national or regional initiatives, funding programmes and platforms. Where relevant, projects are encouraged to take advantage of and connecting to European research infrastructures and services in the area of analytical research infrastructures.

International cooperation is encouraged, especially with Japan.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

This topic implements the co-programmed European Partnership Innovative Advanced Materials for EU (IAM4EU). Proposals funded under this topic are part of the partnership portfolio and are expected to develop synergies with the related stakeholder community and contribute actively to the objectives of the partnership. The different stakeholder communities in IAM4EU are encouraged to coordinate amongst and across each other and foresee adequate resources for this as well as for the overall coordination with IAM4EU in the proposals.

⁹⁰ Findable, Accessible, Interoperable, Reusable data

⁹¹ Findable, Accessible, Interoperable, Reusable data

**HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-44: Innovative Advanced
Materials Innovation Procurement (CSA)**

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁹².</p>

Expected Outcome:

- Leverage innovation procurement processes to stimulate innovation in advanced materials addressing specific needs or challenges faced by public procurers.
- Drive market transformation by aligning public procurement strategies with broader policy objectives, such as the twin transition.
- Establish market dialogue between the public demand side and the supply side, industry, and research organisations, reducing the gap between innovation procurement strategies and innovative solution development roadmaps on both sides.
- Develop proposals for amending Commission guidelines and sharing best practice on innovation procurement targeting resource and energy efficiency gains due to innovative technologies related to advanced materials.
- Identify standardisation needs for procurers in line with the Commission communication on Advanced Materials for Industry Leadership.

⁹² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope: The use of advanced materials⁹³ has the potential to reinforce the Union's resilience and competitiveness as well as achieving circularity, materials efficiency and overall sustainability targets. Public procurers can play a leading role in driving innovation and fostering the uptake of advanced materials, thereby speeding up the market introduction of technologies that enable the twin transition and EU's resilience and economic security. Advanced materials drive innovations in new clean energy technologies provided for in the Net-Zero Industry Act and have the potential to substitute certain Critical Raw Materials (CRMs), thus contributing to the objectives of the CRM Act. Advanced materials can also replace hazardous substances, improve the environmental performance of products and processes, and facilitate circularity.

Public Procurements that make better use of advanced materials can potentially achieve a substantial impact towards these policy objectives in all areas where the public sector is an important customer such as construction, mobility, electronics and energy. Examples of functionalities that could potentially be realised through advanced materials include thermal isolation and protective coatings in construction, superior reliability and durability of energy and mobility infrastructures, improved performance of electronic devices, increased circularity and cost-efficient maintenance of products.

Mandatory requirements in public procurement procedures, relating to for example energy efficiency performance or environmental sustainability, are foreseen in the Energy Efficiency Directive⁹⁴, the Net Zero Industry Act⁹⁵ and the Ecodesign for Sustainable Products Regulation⁹⁶. More generally, the EU Public Procurement Directives allow contracts to be awarded not only based on lowest price, but also on other criteria linked to the subject matter of the contract, such as improved performance/functionalities provided by advanced materials. Furthermore, the Competitiveness Compass for the EU⁹⁷ foresees the introduction of a European preference in public procurement for strategic sectors and technologies, reinforcing technological security and domestic supply chains, as well as simplifying and modernising rules, in particular for start-ups and innovative companies.

The objective of this coordination and support action (CSA) is to create a Europe-wide consortium of public procurers that define together unmet procurement needs for innovative solutions based on advanced materials.

The consortium should prepare future procurement topics to conduct Pre-Commercial Procurements (PCP)/Public Procurements of Innovative Solutions (PPI) that make use of advanced materials with novel functionalities for sectors where public procurers and key customers, in particular aligned with objectives pertinent to advanced materials.

Proposal objectives should reflect making best use in public procurements of innovative material properties that contribute to superior product performance (including the impact on

⁹³ [Advanced Materials for Industrial Leadership, COM\(2024\)98 final](#)

⁹⁴ [Energy Efficiency Directive](#)

⁹⁵ Regulation 2024/1735

⁹⁶ Regulation 2024/1781

⁹⁷ COM(2025)30 final

e.g. production, maintenance or recyclability) and/or contribute to policy objectives such as those formulated in the Green Deal, the Net-Zero Industry Act, the Critical Raw Materials Act and the Ecodesign for Sustainable Products Regulation while having the potential to be exploited as widely as possible.

Activities supported by this CSA should include the following aspects:

- open market consultation with the industry;
- market analysis and analysis of potential barriers (status of market developments regarding advanced materials versus the procurement needs, standardisation, certification, regulatory requirements, intellectual property rights, contracting models, payment schemes, etc.);
- consultations with other public buyers and relevant stakeholders such as end-users to prepare for a future market uptake of the solutions and effective use of innovation procurement (PCP/PPI).

HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-45: Materials Commons for Europe (IA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 28.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 28.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3-4 and achieve TRL 5-6 by the end of the project – see General Annex B.
<i>Exceptional page limits to proposals/applications</i>	In order to accommodate the complexity of the activities required under this topic, the page limit in part B of the General Annexes is exceptionally extended to a total of 60 pages.

Expected Outcome: The project is expected to contribute to the following outcomes:

1. Create a pioneer federated digital infrastructure for advanced materials research and development, demonstrating use cases facilitating industrial uptake and offering a feedback loop to academic research;

2. Give researchers from industry and academia access to interoperable, heterogeneous and FAIR⁹⁸ data sources and computational tools that support the workflows for the design and development of advanced materials;
3. Address the requirements of experimental workflows for high-quality, well-structured and documented primary data by providing tailored solutions to experimentalists;
4. Provide a framework to support self-driving labs using the digital infrastructure, enabling to use of state-of-the-art AI technologies and predictive modelling techniques in industry and academia;
5. Devise mechanisms for long term sustainability and expansion to future use cases.

Scope: This action will accelerate R&I in the area of advanced materials by bringing together at EU level experience, knowledge and resources, from existing and new national digital infrastructures for advanced materials design and development.

It will set the ground for the implementation of a long term sustainable European digital infrastructure for advanced materials R&I as announced in the Communication on Advanced Materials for Industrial Leadership⁹⁹, supporting academic and industrial collaborations.

Such a digital infrastructure should:

- Interconnect existing and new infrastructures devoted to advanced materials design and development across the EU supported by AI tool and facilitate access to High-Performance Computing facilities.
- Help researchers and innovators from across Europe to significantly accelerate the design, development, characterisation and testing of new or improved advanced materials in a controlled environment.
- Foster trust in data sharing among stakeholders (including researchers, research organisations, industry and SMEs) based on FAIR data principles, while also fostering common materials taxonomies, ontologies and data interoperability.
- Be based on an inclusive approach that fosters contributions from academia and industry, across different sectors, using a user-centric view that takes into account intellectual property rights and ownership.
- Support virtual design of advanced materials and related processing. Foster the progress towards self-driving labs which are widely accessible to European researchers.

To achieve these goals, beneficiaries are in principle expected to be publicly funded organisations with the necessary expertise, which are mandated by their competent ministry. They must be able to function as major (e.g., national or regional) hubs and contact points for stakeholders in national ecosystems, exploring models for participation and contribution,

⁹⁸ Findable, Accessible, Interoperable and Reusable

⁹⁹ COM(2024) 98 final

while also working closely with pan-European organisations working on the digitalisation of R&I on advanced materials.

The inclusive nature of the Materials Commons for Europe shall be facilitated through the creation of an advisory board as part of the project composed of relevant ministries or national funding bodies supporting short- and long-term solutions. The applicants are encouraged to consider a project duration of around four years.

The envisioned project should follow the following phases:

1. Phase 1: Planning and Framework Establishment

- Developing functional and non-functional requirements and identifying existing solutions (e.g., cloud solutions, middleware, data spaces) that can be used to accelerate, or be integrated into, the infrastructure. Identification of possible use of existing infrastructures and resources, including support for and integration of self-driving labs.
- Planning a governance framework, able to implement the infrastructure meeting the functional and non-functional requirements, including a strategy for adhesion of new entities in the long term.
- Agreeing on long-term sustainability plan, taking into account academic, industry needs and aspects going beyond R&I.
- Determining compatibility issues and standardisation needs, also in relation to semantic interoperability.
- Setting out key stakeholders, including from academia and industry and related projects and initiatives which will be the users of the infrastructure.

1. Phase 2: Initial build-up

- Building up trust infrastructure and enabling remote access.
- Governance framework for data, computational tools and workflows at operational level.
- Standards and machine readable, domain-specific data schemas and Advanced Programming Interfaces, enabling semantic interoperability and interconnections between different datasets and tools.
- Support for European self-driving labs and their interconnection to the infrastructure, enabling them to reach higher levels of data-driven decision making and automated workflows.

1. Phase 3: Demonstration

- Integration of workflows and tools, including those aimed at creation of primary data.

- 5 use cases across different sectors and related demonstrators, facilitating industrial uptake and offering a feedback loop to academic research.
- concrete steps towards sustainability.

Complementarity and synergies should be sought with existing national initiatives such as Material Digital¹⁰⁰, DIADEM¹⁰¹ and CaPeX¹⁰², as well as with innovation-related strategies, policies, programmes and plans at national and/or regional level. This also extends to EU initiatives such as the proposed “Innovative Materials for EU” partnership, Data Spaces including in particular the European Open Science Cloud (EOSC)¹⁰³, EuroHPC¹⁰⁴ and Open Innovation Testbeds¹⁰⁵.

The action should also envisage the coordination with a possible mutual learning exercise (MLE) on this topic, targeted to countries leading on this area and those who still need to improve national digital infrastructure, enabling an exchange of experience with digital infrastructures, and creating synergies with ongoing related initiatives.

Proposals should involve appropriate expertise in Social Sciences and Humanities (SSH), in particular to achieve a user-centred design that facilitates access across different sectors, and by different communities with different characteristics.

HORIZON-CL4-2025-03-MATERIALS-46: Innovative Advanced Materials (IAMs) for photonics, enabling low-power and ultra-broadband performance for telecommunication (RIA) (Innovative Advanced Materials for Europe partnership)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Subject to restrictions for the protection of European communication

¹⁰⁰ <https://www.materialdigital.de/>

¹⁰¹ <https://pepr-diadem.fr>

¹⁰² <https://capex.dtu.dk/>

¹⁰³ <https://eosc.eu/>

¹⁰⁴ https://eurohpc-ju.europa.eu/index_en

¹⁰⁵ <https://op.europa.eu/en/publication-detail/-/publication/0aaf1e05-2082-11ee-94cb-01aa75ed71a1/language-en>

	networks.
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3 and achieve TRL 6 by the end of the project – see General Annex B

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

- Demonstrated added value of Innovative Advanced materials (IAMs) such as Two-dimensional materials and EO polymers for integrated photonic devices and systems, with focus on low power consumption, enabling future telecommunication networks in which Europe can build competitive value chains.
- IAMs for miniaturized and outperforming photonic integrated technologies e.g. in terms of performance, power, cost, novel functionality enabling the development of future-proof, scalable, low-power and high-bandwidth devices.

Scope: IAMs can be the ideal candidate for several applications in photonics and optoelectronics. These include ultrafast integrated photonic circuits, with modulators, waveguides, detectors, emitters and switches, which play a crucial role in the ongoing quest to increase the speed of data transmission in telecommunications networks. In addition, they find utility in high-frequency transmitter modulators and receiver demodulators, which are essential for advancing wireless telecommunications technologies. They can also serve as integral components in optical interconnects for data centers, high-performance computing (HPCs), and artificial intelligence/machine learning (AI/ML) computing systems.

The main objective of this topic is to explore innovative solutions based on IAMs, including 2DMs, that offer state-of-the-art performance and low power consumption, while demonstrating scalability for volume production, thus exploiting the semiconductor manufacturing infrastructure. The envisioned compact devices are expected to be designed to be compatible with low-power driving electronics and thus reduce energy consumption. Solutions should be compatible with existing photonic integrated platforms and low-voltage electronics.

Proposals are expected to integrate the value chain and include relevant manufacturing technologies required to bring the developed devices to market. Prototypes are expected to be developed using packaged devices, including electronics, to enable testing in relevant environments.

Efforts should be focused on envisioning optimized routes for electronic and photonic design, fabricating photonic circuits, producing IAMs, conducting testing, executing wafer-scale fabrication, and performing co-integration and co-packaging, ultimately leading to demonstrations of the developed technologies and their added values.

Where relevant, proposers are encouraged to take advantage of and connecting to European analytical research infrastructures and services such as the ones in the ARIE network ¹⁰⁶.

Proposals should also consider building their innovations on top of relevant existing standards and consider standardisation as part of innovation and dissemination activities.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

This topic implements the co-programmed European Partnership Innovative Advanced Materials for Europe (IAM4EU). Proposals funded under this topic are part of the IAM4EU partnership portfolio and are expected to develop synergies with the related stakeholder community and contribute actively to the objectives of the partnership. Proposals should seek collaboration, with existing projects and develop synergies with other relevant European, national, or regional initiatives, funding programmes such as the Graphene Flagship ¹⁰⁷ for proposals investigating 2D materials. In addition, outreach to relevant national projects in EU Member States and Associated Countries is encouraged. Adequate resources for all these synergies should be foreseen in the proposal.

HORIZON-CL4-2025-03-MATERIALS-47: Innovative Advanced Materials (IAMs) for conformable, flexible or stretchable electronics (RIA) (Innovative Advanced Materials for Europe partnership)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3 and achieve TRL 6 by the end of the project – see General Annex B

¹⁰⁶ <https://arie-eu.org/>

¹⁰⁷ Graphene Flagship: <https://graphene-flagship.eu/>

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

- Conformable, flexible or stretchable electronic devices and circuits, enabling improved user experience and adoption;
- Sustainable electronics based on low environmental impact materials, promoting reparability and/or recyclability and compatible with energy and resource efficient manufacturing processes;
- Materials tailored for solution-processed electronics such as semiconductor, conductive, dielectric, electroactive polymers, low environmental impact and/or functional substrates, etc. enabling high performance and reliable flexible electronics devices.

Scope: The concept of "ubiquitous electronics" can be a unique opportunity for the EU, opening up new avenues for e.g., wearable electronics, e-textile, e-skin, wellbeing solutions and Internet of wearable things (IoWT), which represent strategic markets for the EU. Innovative and advanced materials (IAMs) can enable new technologies and the much-needed paradigm of an electronic device that can adapt to any substrate. Despite the progress made in this field, current devices are made up of a limited proportion of flexible, conformable, and stretchable components, mainly sensors, while the rest of the circuit remains rigid, limiting this technology shift.

The overall objective is to discover Innovative Advanced Materials (IAMs), including 2DMs, with improved properties in terms of flexibility, conformability and stretchability that can enable novel flexible electronic applications, with a focus on environmentally friendly technologies with reduced carbon footprint processing. Proposals should address most of the following challenges:

- Discomfort of existing wearables leading to non-adoption
- Environmental impact of current electronics due to the use of hazardous and/or critical raw materials, energy-hungry and resources intensive processes
- Low or limited performance and durability of existing materials for high performance and reliable flexible electronic devices and circuits
- Limited integrability of current electronics: size and/or weight, complex cabling, interface between flexible and rigid components, design limitations (i.e., pattern geometry, thickness, dimensions).

Proposals should address reparability and/or recyclability of devices and circuits e.g. reversible adhesives and interconnects, low temperature soldering, bio-based or recycled substrates such as low thermal budget paper and inks, bio-resorbable conductive materials for the next generation of transient implanted medical devices, etc., compatibility with energy and resource efficient manufacturing processes e.g., printing, thermoforming, high pressure forming, lamination, injection moulding, etc.

Where relevant, proposers are encouraged to take advantage of and connecting to European analytical research infrastructures and services such as the ones in the ARIE network ¹⁰⁸.

Proposals should also consider building their innovations on top of relevant existing standards and consider standardisation as part of innovation and dissemination activities.

This topic implements the co-programmed European Partnership Innovative Advanced Materials for Europe (IAM4EU). Proposals funded under this topic are part of the IAM4EU partnership portfolio and are expected to develop synergies with the related stakeholder community and contribute actively to the objectives of the partnership. Proposals should seek collaboration, with existing projects and develop synergies with other relevant European, national, or regional initiatives, funding programmes such as the Graphene Flagship ¹⁰⁹ for proposals investigating 2D materials. In addition, outreach to relevant national projects in EU Member States and Associated Countries is encouraged. Adequate resources for all these synergies should be foreseen in the proposal.

Safe and Sustainable by Design

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-05-MATERIALS-51-two-stage: Development of safe and sustainable by design alternatives to Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) (IA)

Call: INDUSTRY two-stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>

¹⁰⁸ <https://arie-eu.org/>

¹⁰⁹ Graphene Flagship: <https://graphene-flagship.eu/>

<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3-4 and achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹¹⁰.</p>
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome: Projects are expected to contribute to the following outcomes:

- Make safer and more sustainable alternatives to per- and poly-fluoroalkyl substances (PFAS) available to industries offering products with targeted performances supporting their competitiveness;
- Give the Commission, regulatory agencies, Member States and associated countries access to new and publicly available knowledge about PFAS alternatives;
- Support EU strategies, policies and legislation, such as future PFAS restrictions under the REACH Regulation ¹¹¹, as well as requirements for the EU Ecolabel ¹¹², EU Taxonomy ¹¹³ and Eco-design for Sustainable Products Regulation (ESPR) ¹¹⁴, by making safe and sustainable alternatives to PFAS available;

¹¹⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹¹¹ Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02006R1907-20231201>

¹¹² <https://ec.europa.eu/environment/ecolabel/the-ecolabel-scheme.html>

¹¹³ https://commission.europa.eu/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/sustainable-products/ecodesign-sustainable-products-regulation_en

- Demonstrate the applicability of the ‘Safe and Sustainable by Design’ (SSbD) framework¹¹⁵ to avoid regrettable substitution when developing innovative safe alternatives to PFAS.

Scope: PFAS are a large class of substances used in a wide range of applications (for instance, as adhesives, coatings, lubricants, sealants, surfactants), for their technical and/or safety functions (e.g., water and oil repellence, antiadhesion, thermal & chemical stability)¹¹⁶. Nevertheless, PFAS have been detected in groundwater, surface water and soil, the remediation of which is extremely problematic^{117,118}. Their accumulation in the environment has been linked to negative effects for the wildlife and the human health, including carcinogenic, mutagenic, reprotoxic and toxic effects for the endocrine system¹¹⁹. In January 2023, five national authorities submitted to the European Chemicals Agency (ECHA) a PFAS restriction dossier to ban the manufacture, placing on the market and use of PFAS as a chemical class in all uses, with few exemptions¹²⁰.

The Commission initiative for SSbD sets a framework which should be a reference in the proposal. The new alternatives to be developed should meet the technical functions required in the specific applications and align with such framework.

Proposals should address at least one industrial application and should develop one or more new chemical substances or technologies to replace existing PFAS used, according to abovementioned applications and functions, in one of the following areas:

- **Electronics, electrical appliances and grids** (e.g., wires, cables, heat transfer fluids, transformers, switchgears), where PFAS are currently used to provide a combination of technical and/or safety functions to withstand impact of high temperature, pressure and chemicals, ensure corrosion inhibition and non-flammability.
- **Construction technologies** (e.g., carpeting, drywall, paintings, foams) where PFAS are currently used to provide a combination of technical functions such as resistance in harsh environments and for wetting agents.
- **Technical textiles** (e.g., personal protective equipment, construction textiles, filtration and separation media, technical textiles for transport applications) where PFAS are currently used for their repellence but also heat stability and corrosion inhibition.

¹¹⁵ See documents defining the SSbD framework and criteria on: https://ec.europa.eu/info/research-and-innovation/research-area/industrial-research-and-innovation/key-enabling-technologies/advanced-materials-and-chemicals_en

¹¹⁶ This list of applications and functions are not exhaustive, unless explicitly mentioned.

¹¹⁷ <https://www.eea.europa.eu/en/european-zero-pollution-dashboards/indicators/pfas-contamination-and-soil-remediation-signal>

¹¹⁸ [PFAS in European seas \(Signal\) \(europa.eu\)](https://www.euractiv.com/en/chemicals/pfas-in-european-seas-signal/europa.eu/)

¹¹⁹ <https://doi.org/10.2903/j.efsa.2022.e200418>

¹²⁰ [Per- and polyfluoroalkyl substances \(PFAS\) - ECHA \(europa.eu\)](https://echa.europa.eu/per-and-polyfluoroalkyl-substances-pfas)

- **Automotive parts** (*e.g.* electrical parts including batteries, membranes, hoses and pipes, brakes, rubber processing) where PFAS are also currently used¹²¹.

All actors along the value chain should be involved to ensure the new substance has a clear use case, market and potential to grow.

Multidisciplinary research activities should address all of the following:

- The ‘Safe and Sustainable by Design’ framework should be applied when developing the alternative(s) and the assessment results be published and underlying methods and data made FAIR across the whole value chain;
- The selection of the PFAS alternatives to be developed should be justified with a technological and socio-economic analysis, also considering potential impacts on health and reproductive health;
- Novel PFAS-free materials or structures should undergo testing under relevant conditions to ensure their properties meet or exceed the properties of PFAS-based solutions across various applications;
- The substitution barriers for the selected applications should be identified and a driving mechanism for a maximal substitution in the targeted value chains proposed;
- Challenges for the adaption of existing production lines should be identified and solutions proposed;
- Communication and other outreach actions to all stakeholders and specifically citizens about the benefits of the developed ‘Safe and Sustainable by Design’ alternatives to PFAS substances.
- Proposals should involve appropriate expertise in Social Sciences and Humanities (SSH), *e.g.* with communities of citizens to engage in product reliability and consumer rights. At least, an analysis of how the introduction of such alternatives is positively or negatively considered by users and the general population, disruptive (or not) for the established social norms or behavioural patterns, should be conducted;
- Policy briefs will be reported to the European Commission on a yearly basis to communicate on the key results and achievements.

Proposals should indicate to which chapters of the Strategic Research and Innovation Plan for chemicals and materials¹²² they will contribute.

Proposals submitted under this topic should include a business case and exploitation strategy.

¹²¹ The use of (gaseous) PFAS in air conditioning is outside the scope of this call.

¹²² https://ec.europa.eu/info/research-and-innovation/research-area/industrial-research-and-innovation/key-enabling-technologies/advanced-materials-and-chemicals_en

In accordance with the SSbD framework, this topic requires the effective demonstration of the added value of the outcomes to protect human health and the environment, *e.g.* in the fields of biodiversity protection, indoor and /or outdoor air quality.

Collaboration with existing Open Innovation Test Beds (OITBs)¹²³ should be explored - where relevant.

International collaboration is encouraged.

The challenge of developing PFAS alternatives should also cooperate with relevant topics under other clusters and calls of Horizon Europe (*e.g.* HORIZON-CL4-2021-RESILIENCE-01-08¹²⁴, HORIZON-CL4-2022-RESILIENCE-01-23¹²⁵, HORIZON-CL6-2023-ZEROPOLLUTION-02-2-two-stage¹²⁶, Horizon 2020 LC-GD-8-1-2020¹²⁷), including topics under the Chips Joint Undertaking and the Clean Hydrogen Joint Undertaking (*e.g.* HORIZON-JTI-CLEANH2-2024-05-02: Development of non-fluorinated components for fuel cells and electrolyzers). Proposals should specifically allocate the necessary resources for collaboration with the other relevant projects.

HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-52: Accelerate the uptake of life-cycle assessment (LCA) for Safe and Sustainable by Design (SSbD) chemicals and materials and resulting products (RIA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 and 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3-4 and achieve TRL 5-6 by the end of the project – see General Annex B.
<i>Legal and financial</i>	The rules are described in General Annex G. The following exceptions

¹²³ https://ec.europa.eu/info/research-and-innovation/research-area/industrial-research-and-innovation/sustainable-production-processes_en

¹²⁴ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl4-2021-resilience-01-08>

¹²⁵ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl4-2022-resilience-01-23>

¹²⁶ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl6-2023-zeropollution-02-2-two-stage>

¹²⁷ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/lc-gd-8-1-2020>

<i>set-up of the Grant Agreements</i>	apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹²⁸ .
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Expected Outcome: Projects are expected to contribute to the following outcomes:

- Support the implementation of EU strategies such as the proposed Eco-design for Sustainable Products Regulation (ESPR)¹²⁹, the EU Ecolabel¹³⁰, the Green Claims Directive proposal¹³¹, the One-Substance-One-Assessment package¹³², the Batteries Regulation¹³³, the Critical Raw Materials Act¹³⁴ and the Net Zero Industry Act¹³⁵ with scientific evidence on sustainability throughout the entire life cycle of chemicals and materials,;
- Reduce significantly the cost to apply LCA at company level, including for SMEs, compared to current costs;
- Allow an efficient and simplified LCA application at early stage of design and facilitate decision making for companies and policy makers by providing user-friendly and cost-effective tools, methods and data;
- Provide advanced, reliable and predictive life cycle models and impact assessment methods, allowing for a satisfactory measurement of planetary boundaries;

Scope: Proposals should identify and fill the gaps in LCA tools, methods and data used for improving the environmental sustainability and efficiency of chemicals, materials and resulting products, taking also into account the criticality of raw materials. The Environmental Footprint (EF) methods should in particular be built on. All stages from raw material extraction to end-of-life disposal of products should be included. Data-driven decisions and actions for a greener and more sustainable future should be enabled, while respecting

¹²⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/lc-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/lc-decision_he_en.pdf

¹²⁹ [Proposal for Ecodesign for Sustainable Products Regulation](#)

¹³⁰ [EU Ecolabel](#)

¹³¹ [Green Claims Directive proposal](#)

¹³² [‘One substance, one assessment’ chemicals assessment reform](#)

¹³³ [Batteries Regulation](#)

¹³⁴ [European Critical Raw Materials Act](#)

¹³⁵ [Net-Zero Industry Act](#)

planetary boundaries. The tools should be in compliance with the Safe and Sustainable by Design¹³⁶ framework, hence to be considered as a reference in the proposal.

Multidisciplinary research activities should address all the following:

- Develop advanced, user-friendly LCA tools and methodologies that allow for a comprehensive assessment of the environmental sustainability of the entire lifecycle of chemicals, materials and resulting products whilst considering planetary boundaries;
- Develop LCA datasets, in particular building on the EC PEF methods, from design to end-of-life of at least three relevant chemicals or materials and a selection of their resulting products. The selected substances should be emerging alternatives to substances of concern (as defined in the ESPR proposal) and should have a high socio-economic value;
- Develop solutions to fill in the identified data and assessment gaps and to estimate LCA uncertainty, using advanced digital technologies, modelling, machine learning and artificial intelligence;
- Feed relevant sustainability databases managed by the European Institutions and Agencies, such as the European Platform on LCA¹³⁷ (EPLCA), with FAIR¹³⁸ data and ensure new tools developed are findable by stakeholders.
- Provide guidance for LCA modelling of circularity scenarios for chemicals, materials and resulting products, in alignment with EC PEF methods and the SSbD framework;
- Ensure that the developed tools, methods and datasets are cost-effective and user-friendly in order to increase uptake and use in industry;
- Develop guidelines and user-friendly solutions to enable a seamless integration of the new LCA approaches with existing safety assessment tools and methods (notably the EC PEF method) to ensure a holistic SSbD assessment from the early innovation phases;
- Engage with the wider stakeholder community, especially with SMEs, to promote a harmonised use of the proposed tools and methodologies;
- Perform training and knowledge transfer activities to promote LCA and SSbD knowledge as well as life cycle thinking within the R&I ecosystem;
- Projects should contribute to yearly policy briefs and technical discussions, for example under the Eco-design for Sustainable Products Regulation (ESPR)¹³⁹ or with the EF Technical Advisory Board;

¹³⁶ See documents defining the SSbD framework on: https://ec.europa.eu/info/research-and-innovation/research-area/industrial-research-and-innovation/key-enabling-technologies/advanced-materials-and-chemicals_en

¹³⁷ [European Platform on LCA | EPLCA](#)

¹³⁸ Findable, Accessible, Interoperable, Reusable

- Proposals should leverage the experience of Social Sciences and Humanities (SSH) researchers in refining models related to child labour, employment conditions, and other socio-economic factors within LCA;
- The improved/advanced tools and methods should consider evaluating the economic and social dimension of sustainability at product level based on a functional unit.

Proposals should indicate to which chapters of the Strategic Research and Innovation Plan for chemicals and materials¹⁴⁰ they will contribute.

International collaboration is encouraged.

Projects should build on, or seek collaboration with, existing projects and develop synergies with other relevant European, national or regional initiatives, funding programmes and platforms. Specifically, projects should collaborate with the Partnership on Assessment of Risks from Chemicals¹⁴¹ (PARC) and ensure complementarity with the SSbD toolbox¹⁴² and also engage with the IRISS project¹⁴³ on the different value chains. Additionally, projects are encouraged to build on the results obtained by the ORIENTING¹⁴⁴ project funded under the CE-NMBP-42-2020¹⁴⁵ topic which has aimed to operationalise methodologies for LCA and to propose options to further advance the Product Environmental Footprint (PEF). Proposals should allocate the necessary resources for the above activities. Where relevant, proposers are encouraged to take advantage of and connecting to European research infrastructures and services.

Synergies with Horizon Europe missions as relevant are encouraged.

Textiles

Proposals are invited against the following topic(s):

HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-31: Digitally enabled local-for-local textile and apparel production (Textiles for the Future Partnership) (IA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission

¹³⁹ [Proposal for Ecodesign for Sustainable Products Regulation](#)

¹⁴⁰ [Strategic Research and Innovation Plan for safe and sustainable Chemicals and Materials | Research and Innovation](#)

¹⁴¹ [Partnership for the Assessment of Risks from Chemicals | Parc](#)

¹⁴² [Safe and sustainable by design toolbox | Parc](#)

¹⁴³ [About IRISS](#)

¹⁴⁴ [Orienting EU Project](#)

¹⁴⁵ [Materials life cycle sustainability analysis](#)

	and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁴⁶</p>
<i>Exceptional page limits to proposals/applications</i>	In order to include a business case and exploitation strategy, as outlined in the introduction to this Destination, the page limit in part B of the General Annexes is exceptionally extended by 3 pages.

Expected Outcome:

- Demonstrate economic viability of local on-demand production of fashion and other complex textile products, including for professional or public end markets, through integration of advanced digital technologies across the full product life cycle from creation, production, distribution, use and end-of-life;
- Accelerate adoption of advanced digital product creation and manufacturing technologies by European textile and fashion SMEs; and
- Increase share of re- or near-shored production of time-critical textile products, made in socially and environmentally responsible ways, including recycled materials; and in this way contribute to the mitigation of GHG emissions.

¹⁴⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope: Up to 80% of textile and apparel products consumed in Europe are partially or fully made outside Europe, exploiting lower labour cost as well as laxer local standards and regulations with regards to environmental, human health and labour rights protection. This offshoring of production has slowed textile manufacturing technology innovation in Europe and led to a complex long-lead time supply chain, generating unnecessary production and pre-consumer waste from unused mass-produced materials and unsold products not meeting actual demand.

Digitalisation in product development, production and on-demand supply chains has the potential to significantly reduce such overproduction, and enable business models that can competitively offer rapid short run or single piece production as well as related repair or end-of-life dismantling services for effective local recycling.

These aspects are particularly important in view of the new requirements to be set under the Ecodesign for Sustainable Products Regulation under which textiles are flagged as one of the priority product groups for the elaboration of a sustainable policy framework that could consider durability, recyclability, repairability and recycled content the most important product aspects

Proposals should address at least one of the two following activities:

1. Small scale demonstration, experimentation or piloting of approaches, processes or technologies for:

- Complex manufacturing operations including yarn or fabric production and final product assembly that go beyond state-of-the-art processes such as digital garment printing;
- Seamless interoperable data flows and transparency towards the end user that pursue and harness waste minimisation, short time to market and trust-building between supply chain partners and end users;
- Valorisation of locally available renewable raw materials (biobased or recycled) and regional production capacities that allow for shortest time to market and lowest environmental footprint;
- Micro-factories that can flexibly combine small-scale local production, repair, and re-and de-manufacturing operations.

2. Uptake of innovative service-driven business models that maximise consumer value creation and lowers total cost of ownership from high-quality long-lasting products.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination.

Proposals should include financial support to third party (FSTP) to maximise the number of SMEs involved in small-scale innovation projects. All such innovation projects should include at least one advanced technology provider; one manufacturing SME; and one end-market facing company, such as a retailer or a professional or consumer service provider. The

partners should be from at least two different countries. FSTP funding can be provided only to SME participants, while the active participation of larger companies in such innovation projects is encouraged. The involvement of start-ups is also specifically encouraged. To ensure a focused effort, each third-party beneficiary should receive funding up to EUR 60 000, in projects with an indicative duration of 18 months.

International cooperation may be considered, in particular with countries that are advanced in the field.

Where relevant, projects should build on or seek collaboration with existing projects and develop synergies with other relevant European, national or regional initiatives and funding programmes.

This topic implements the co-programmed European Partnership ‘Textiles for the Future’.

Destination 3: Developing an agile and secure single market and infrastructure for data-services and trustworthy artificial intelligence services

The next stage of the data economy will shift data flows from the consumer-to-business model to business-to-business, business-to-consumer, consumer-to-consumer, business-to-government and government-to-business models.

Destination 3 will continue to support technologies that are crucial for the next stages of the data economy, such as privacy preserving technologies and compliance technologies, source and transaction integrity (such as blockchain), and technologies underpinning interoperable and compliant industrial, public and personal data spaces and secure data exchanges. Rebalancing the data, computing, and learning capacity across the cloud-to-edge/internet of things continuum will let businesses, public organisations and individuals exploit data for trustworthy and bias-free decision making.

Wide availability of reliable data, like from the European data spaces in the Digital Europe Programme, together with new interactive, immersive and context-aware technologies – digital twins, cyber-physical systems, internet of things and virtual worlds – will make this easier than ever before. This will help all people groups benefit from the power of data and AI in a fair, unbiased and compliant way.

Industrial virtual worlds that are open and interconnected bring alternative but realistic and coherent views on what are widely distributed, diverse and complex devices, processes and value chains. Beyond visualisation and simulation, and thanks to new types of interfaces (like XR/VR), secure data sharing and distributed computing technologies, they allow for safe and natural ways of interaction and control, high level of response to local events, real-time optimisation and dynamic re-configuration in key application areas like for: i) the integration of renewable energy sources, ii) smart farming, iii) agile supply chains and logistics, and iv) hyperflexible manufacturing and manufacturing-as-a-service. Similarly, data-driven tools, AI, language technology, adaptive and self-programmed robotics, and new energy-aware programming solutions will improve operational and energy efficiency in lead sectors like healthcare, manufacturing, mobility, and the energy sector itself.

Quantum technologies will further expand the data economy in high value-added areas where traditional approaches struggle to deliver, for instance, highly secure communication of critical data, or on exponentially complex simulations, machine learning and optimisation. Quantum networks will provide highly secure, tamper-free data storage and transmission, which can be critical in situations where the integrity and confidentiality of the data are paramount, like in the health sector, smart cities, energy systems or other critical infrastructure.

The strategic development of communication networks (5G, 6G) as well as the future structures of data intermediation and governance, high-capacity computing and artificial intelligence through the cloud and the edge are very important to the single market, Europe's economic security and sustainable competitiveness. They are also vital for trustworthy data- and AI-based services.

Connected Collaborative Computing Networks (3C networks)

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-03-DATA-08: Large-scale pilots for supply end-to-end infrastructures integrating device, network computing and communication capabilities for Telco Edge Cloud deployments, as a basis for Connected Collaborative Computing Networks (3C networks) (RIA)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 75.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 75.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway and the following additional associated countries: Canada, Israel, the Republic of Korea, New Zealand, Switzerland, and the United Kingdom.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the</p>

	meaning of ‘restrictions for the protection of European communication networks’ (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees. ¹⁴⁷
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3 and achieve TRL 7 by the end of the project – see General Annex B.

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

- Strengthen European industrial ecosystems for the 3C Network, while enabling the path towards sustainability and competitiveness of key vertical sectors in the EU, to be supported in the work programme 2026-2027 of Horizon Europe by future large-scale pilot focusing on 3Cs demand in vertical industrial sectors such as “industrial virtual worlds” (automotive, aerospace, processing, manufacturing, agriculture, electronics), services (mobility, energy, smart communities, health) or others.
- Strategic industrial cooperation among network and data processing stakeholders which enable new revenue streams in support of viable communication infrastructures by building open platforms, underpinning an emerging industrial open telco edge cloud ecosystem to be established in Europe.
- The pilot should devise appropriate cooperation mechanisms with the Open Internet Stack actions, to help defining the requirements for the development of the building blocks and ensure their integration in the pilot, including envisaging mechanisms for testing and integration of the solutions developed by the Open Internet Stack.
- A European vision of advanced digital infrastructures through the convergence of connectivity with interoperable edge and cloud computing services. Moreover, the large-scale pilot should seek and include sufficient evidence of a clear commitment from the major European telecom, cloud and edge providers to industrialise further the results of the pilot among the major stakeholders, in particular by considering the necessary business adaptations and future perspectives, etc. In this context, an advisory group of end users should be set up to discuss and advise about user requirements to be considered in relation to the pilots. This group will collect requirements from a large range of users and test them through small demonstrations.

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The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

Scope: The recent Commission White Paper “How to master Europe’s digital infrastructure needs?” highlights the convergence of electronic communications networks and cloud services, and call for the strengthening of the EU “Telco Edge Cloud” infrastructure, by creating the 3C Network (Connected Collaborative Computing).

The convergence of connectivity, including mobile networks (5G and 5G advanced), combined with computing environments at the edge and cloud is a unique opportunity for the European telecom industry to drive a European vision of next generation digital infrastructures and meet future processing demands of IoT and AI. Investing into future computing and connectivity paradigms will strengthen the industrial European supply side and deliver an enablement for the path towards sustainability of key sectors in the demand side.

Increased density of edge and cloud facilities is needed to sustain adoption of innovative and sovereign telco edge cloud technologies across Europe. Backed by ubiquitous connectivity to deliver the right performance in terms of bandwidth and latency, Europe’s infrastructure will require advanced network management and orchestration technology as well as neutral interconnection services to guarantee efficient infrastructure utilisation and enable innovative use cases at scale.

The 3C Network large-scale pilot (focusing on the supply side) aims at setting up end-to-end integrated infrastructures and platforms, bringing together players from different segments of the connectivity and compute value chain and beyond. The main target is to research and validate the integration of device, network, cloud and edge computing, and communication capabilities for telco edge cloud deployments to realize a ubiquitous mesh of computing and communication resources. This will complement the Telco Edge Cloud reference deployments of Digital Europe and IPCEI-CIS and will feed into future deployment initiatives.

Therefore, the scope for the action would be the following:

- Researching and prototyping at scale end-to-end telco edge cloud integrated infrastructures and platforms, bringing together players from different segments of the connectivity value chain and beyond, such as operators, system integrators, network/cloud/edge suppliers, experts on AI and (wireless) communication, experts on testing and validation of network technologies and services, IoT platform providers et al.
- Developing open orchestration platforms across the telco edge cloud continuum, to support unlocking the transformative value of AI for European businesses and driving business growth in multiple industries strategic for Europe and associated countries.
- Integrating AI solutions for optimising the orchestration of the different resources to be managed by the pilot actions, such as bandwidth, spectrum, computing, hardware, other user requirements.

- Investigation, testing, validation and demonstration of solutions and prototypes of the simultaneous use of integrated devices, edge and cloud computing and communication resources in operational environments (including both public networks and large private networks), ensuring high level of security and privacy, energy efficiency, transparency and control of the ecological footprint.
- Investigation, testing, validation and demonstration of integration of available infrastructures as cloud-edge continuum with distributed systems such as blockchain infrastructure and services, data spaces and seamless and comprehensive AI systems in the process of creation of decentralised digital infrastructure network, including the compliance with applicable EU regulations.
- Exploration of novel approaches for cybersecurity by design and sustainability in advanced communication infrastructure.

With radical changes triggered by GenAI, as well as AI applications penetrating more and more industrial domains, demands for low latency are looming. The pilot should have to tackle the network evolution complementing the cloud with progress towards the edge, as well as needing reliability from the mobile networks.

Key aspects to be researched, validated and demonstrated by the 3C Network end-to-end infrastructures include:

- AI-enabled orchestration and quality assurance tools, algorithms and techniques which cater for hybrid multi-cloud technologies.
- Enablers for multi-level (networks, edge, cloud, and services) federation management and interoperability.
- Tools and mechanisms that facilitate the standardised exposure of network functions.
- Enablement of Edge-as-a-Service approaches that effectively integrate cloud computing's multi-tenancy and resource sharing concepts into access networks.
- Security and Compliance mechanisms targeted for telco edge cloud.
- Tools for guaranteed end-to-end QoS and QoE across heterogeneous network, cloud and edge infrastructures.
- Mechanisms to exploit specialised hardware and accelerators to address the strict requirements (e.g. latency, energy efficiency) of virtualised network functions.
- Investigation on the trade-offs associated to Edge nodes density and placement required in telco edge cloud deployments to achieve the target latency rates.
- Lightweight virtualisation and cloud-native approaches for virtualised network functions.

- Novel approaches to handle user mobility to ensure edge service continuity and quality of service.
- Privacy preserving record linkage on individual citizen level and device-related level to foster meaningful linkage of data for secondary usage.

Thanks to these, the pilot and its associated research should support the emergence of telco edge cloud as-a-service approaches that successfully implement multi-tenancy and resource sharing notions from cloud computing into network infrastructure and resources. In addition, the project infrastructures should cater for the pragmatic complexities associated with the physical placement of the various types of telco edge cloud platforms (near, far, regional,) across the territory considering the necessary trade-offs between performance, capacity, and costs.

Furthermore, the pilot should tackle the need for multi-cloud and edge service orchestration at scale, which enables workload portability across providers and technologies as well as effective service placement and lightweight and cloud-native forms for NFV and optimisation by means of acceleration, multi-cloud orchestration, multi-level federation and mobility management.

Moreover, the technical solutions in the pilot should investigate the use of AI to handle the optimal allocation and optimisation of the operation of the digital infrastructures resultant of the combination of distributed compute and network resources of the edge cloud compute continuum in a predictive and efficient manner and at scale. These should take into consideration the appropriate QoS trade-offs in relation to bandwidth, spectrum, computing, hardware and other functional and non-functional requirements, cater for the need for AI/ML to improve optimisation of assets and process and closed-loop automation, and target development and life-cycle management of AI models and resource management tools for the optimal management of combined and converged network, cloud and edge infrastructures. It will integrate security and privacy by design into account and seek to incorporate mechanisms such as edge discovery and deployment as-a-service delivery, end-to-end network and compute performance, energy efficiency and mobility management, including the Non-Terrestrial Network component for ubiquity.

The pilot should provide an *open, multi-supplier, multi-vendor, and interoperable Telco Edge Cloud reference architecture and ecosystem* that encourages cooperation and cooperative development among all key stakeholders, with broad representation of MS/AC, owing to the joint research to be implemented. Furthermore, the pilot should define open access policies and mechanisms that aim to maximise the impact of the provided infrastructure which take into consideration the long-term sustainability and addressing different uses by industrial and research communities. When necessary, these should explore collaboration with complementary actions addressing the demand side.

Project participants should analyse the existing standards landscape as a key state-of-the-art input when planning their project activities, and relevant open-source projects (e.g., Sylva, ANUJET, Nephio, CAMARA). The development paths of the critical technologies are

expected to be merged and aligned to support the standardisation and uptake of 6G and Web 4.0.

The pilot should help maturing the technologies resulting from medium TRLs projects, while performing its own research towards enabling and prototyping of converged telco cloud edge platforms in operational and multi-suppliers, multi-domain and multi-tenant environments.

The pilot should cover research on infrastructure and platforms mid-TRLs telco edge cloud technologies, including development of telco-cloud network resources orchestration, demos, proof of concepts and early deployment of technologies.

The main achievements of the pilot should be showcased by means of small-scale demonstrations, that could be scaled up in future work programmes, for instance demonstrators on virtual worlds for industrial settings.

The pilot should ensure a high degree of participation of stakeholders from the relevant technological sectors, including SMEs, scaleups and start-ups, as well as properly consider the demand side from vertical sectors and broad representation of MS/AC, also in view of the planned demand-side large-scale pilots. In this regard, proposals should clearly define the roles and responsibilities of the participating stakeholders in developing, testing, validating, updating, maintaining and/ or using the technologies and services of the 3Cs network. The pilot's Consortium should also define a policy on the ownership and access of 3Cs network resources and facilities, during the Horizon Europe project and beyond.

Proposals are expected to build synergies and ensure complementarities with relevant topics under SNS JU Work Programme 2022-2024, Digital Europe Programme WP2023-2024, IPCEI-CIS, Connecting Europe Facility.

The large-scale pilot would ideally reuse and extend relevant open-source frameworks and capitalise on existing testing and trial platforms from European or national initiatives¹⁴⁸ among which the IPCEI-CIS, SNS Stream C (dedicated to the development of EU-wide experimentation platforms incorporating promising 6G enablers), SNS Stream D projects (which focuses on implementing large-scale trials and targets specific verticals of high economic and societal importance), and other SNS projects, results from Open Internet Stack action, the Cloud-Edge-IoT HE projects, and the Digital Europe Programme's Reference edge-cloud deployments, the "Empowering AI across the continuum" and the "Software engineering for AI" R&I areas, as well as research results on infrastructure and platforms. It should also establish strong relationship and collaboration with complementary EU-funded research activities, and also ensure close interaction with the relevant constituencies driving that research, including the Open Internet Stack constituencies. Relevant research from both the supply and the demand side of 3C networks should be considered in this regard, thus ensuring participation of research organisations from all across the value chain.

Finally, digital autonomy in edge and cloud implies that computation infrastructure should be able to be sourced from European technology, including non-terrestrial network

¹⁴⁸ Such as UNICO 6G in Spain, CAMPUS-OS in Germany, 6G Flagship in Finland, etc.

infrastructure. The subsequent step following the EU investments in processors for HPC (under the EuroHPC Joint Undertaking) is to extend its success to the rest of the computing continuum. Therefore, the project will also seek to coordinate with other EU (HE) research activities with a view to integrating new processor architectures into cloud edge infrastructures as they become available.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

HORIZON-CL4-2025-03-DATA-09: Alignment of stakeholders towards the supply-side large-scale pilot of end-to-end infrastructures integrating device, network computing and communication capabilities (CSA)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.80 and 2.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway and associated countries.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, shall not participate in the action.</p>

Expected Outcome: The supply-side large-scale pilot (LSP) of end-to-end infrastructures integrating device, network computing and communication capabilities will develop

horizontal facilities for the benefit of constituencies represented in the supply LSP and also beyond, including those focusing on the demand side of the referred infrastructures. This CSA is expected to bring together all those stakeholders. In any case, the CSA action should be prepared, managed and coordinated by key stakeholders in the field, while it would be important that the coordinator adopts a neutral position.

Project results are expected to contribute to the following expected outcomes:

- Coordination of the different stakeholder communities in the scope of the supply LSP work (software, hardware, computing, telcos, AI, cloud...), bringing stakeholders together to work on a common plan and technology roadmap on supply and demand of end-to-end infrastructures integrating device, network computing and communication capabilities, monitoring implementation and identifying gaps.
- Enable the supply-side LSP to consider the demand-side perspective, including requirements from the different applications/user communities.
- Help stakeholders build small, and later larger-scale, demos based on the developments of the supply-side LSP, as well as developments from future Horizon research actions as possible and appropriate.
- Assist stakeholders from the different segments of the value chain (telecoms, software providers, middleware stack providers, etc.) to converge towards a shared approach, while modular and flexible, for telco-edge-cloud infrastructure and services
- Put in place mechanisms for exchange, collaboration and shared governance to facilitate smooth cooperation between supply and demand-side activities, including the Open Internet Stack, towards a common platform approach across industrial actors, including a repository with critical mass of largely open-source building blocks, as well as maintenance and support services.

Scope: The expected scope of the CSA for this governance mechanism to function would be the following:

- Consolidate priorities and maximise benefits across different demand perspectives and timelines for key infrastructure services to be implemented.
- Ensure alignment of demand and supply side strategies and roadmaps, in line with (and contributing to) the White Paper on communication infrastructures and other relevant EU policy.
- Ensure coordination and integration of the work of the actions on the supply side pilot and the Open Internet Stack.
- Open-source delivery of Telco Edge Cloud building blocks by the supply side pilot, which will be the foreseen backbone to articulate the cooperation among supply- and demand-side LSPs.

- These open-source modules should be aligned with industrial interests and where appropriate with common European building blocks including with the developments at IPCEI-CIS Telco Edge Cloud community initiatives (e.g. Sylva, Anuket, Nephio and CAMARA).¹⁴⁹
- The demand-side developments in the relevant verticals will offer a continuous feedback loop to the supply side endeavours, while they will benefit from the progressive developments of the supply LSP.
- Provide a foundation for exploitation of European technology developed under the 3C initiative as an alternative to the platforms led by large multinationals. The project should provide a forum for consultation and input of the demand-side application sectors and verticals into the development of the supply-side architecture and building blocks.
- Identification of paradigms shifts evolving in relevant vertical domains like virtual worlds as a driver for emerging network virtualisation and performance as well as vertical services like mobility, communities or energy.
- Assessment of monetising edge computing, interoperability of middleware and SW framework through trend scouting on markets, value chains and ecosystems in the area of dynamic content delivery, AI adoption for telco operation and edge computing, convergence across the telco-cloud-edge- IoT continuum.

Proposals are expected to build synergies with relevant topics under Digital Europe Programme (DEP) and Connecting Europe Facility (CEF).

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

HORIZON-CL4-2025-03-DATA-10: Roadmap for next generation computing technologies from IoT device level to edge to cloud to HPC (CSA)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.80 and 2.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility</i>	The conditions are described in General Annex B. The following

¹⁴⁹ Sylva – Linux Foundation Projects Site (sylvaproject.org); Camara Project – Linux Foundation Project.

<i>conditions</i>	exceptions apply: Subject to restrictions for the protection of European communication networks.
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Expected Outcome: The CSA action should be prepared, managed and coordinated by key stakeholders in the field. Proposal results are expected to contribute to the following expected outcomes:

- Support structure for the European Computing ecosystem: networking events (including conferences, summer schools etc.) and vision workshops for the academic and industrial computing community;
- Yearly updated roadmaps on computing addressing the area from a broad perspective from edge-IoT device to edge cloud to cloud to HPC, from scientific to industrial to societal and research applications, and addressing all relevant aspects such as real-time, security, support to artificial intelligence, use of generative AI for computing system engineering, etc.

Scope: To support the European Commission and the European computing constituency by providing to them annually updated roadmaps for research and innovation related to computing. This topic is overarching and building the bridge between Destinations 3 (heading “From Cloud to Edge to IoT for European Data”), Destination 4 (“Ultra Low Power Processors”), as well as the Joint Undertakings (JU) on Chips, Smart Networks and Services, and high-performance computing (HPC). This effort builds on the achievements and structures established by the HIPEAC project and think tank of renowned European research centres on computing “at large” and their key experts. Both the academic visions as well as the industrial perspective complementing the Strategic Research and Innovation Agendas of the JUs as well as the roadmapping done by the European Alliance for Industrial Data, Edge & Cloud as well as the IPCEI exploitation office should be taken into consideration.

HORIZON-CL4-2025-03-DATA-11: Open Internet Stack: development of technological commons/open-source 3C building blocks (RIA)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Subject to restrictions for the protection of European communication networks.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 400 000 to allow 1/ cases where a given legal entity may receive several grants (e.g. from different calls) 2/ reaching the maturity level for third party's project to ensure sustainability with multiple awards.</p> <p>To support and mobilise internet innovators, a maximum of 70% of the total requested EU contribution could be allocated to financial support to third parties, selected through open calls.</p>

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

- A publicly available and operational stack of strategic commons focusing on internet technologies for trust, transactions, connectivity, and decentralisation implementing the European vision of next generation digital infrastructures, in particular the 3Cs networks (in close cooperation with the 3Cs large scale pilots), and the wider Web 4.0.
- A library of inclusive, trustworthy, interoperable, and human-centric applications and services leveraging Open-Source commons building blocks which will increase the value of the network in the respect of European values. These Open Source solutions will be integrated and tested / validated in the 3C large scale pilot.
- A flourishing European ecosystem of contributors to digital commons– e.g., individuals, SMEs, academics - stimulated by critical challenges around sovereignty, trust, and user empowerment.

Tools, services, and insights supporting compliance with and implementation of EU legal framework e.g., EUDI, CRA, DMA, DSA, GDPR, Data Act, DGA.

Scope: This action will foster an Open-Source framework, developed through commons, i.e. Open Source software governed by communities of contributors, that will provide key technology components for the operation of the 3C large scale pilot. They will be addressing relevant areas, structuring them in a stack and supporting the development of 3C building blocks making them available through a library of digital commons supporting applications on top of the European providers ecosystem.

It will mainly cover three technology areas:

- Trust technologies such as privacy enhancing technologies, AI-based agents and trusted technologies for identities allowing exchanges across multiple 3C networks, providing the users with transparent, auditable, secure, and resilient building blocks and tools across the internet stack.
- Network and connectivity technologies according to the identified needs of the 3C large scale pilot.
- Decentralised technologies for an immersive world notably based on open standards ensuring interoperable flow of data and events across the 3C pilot networks and operators.

In order to implement the European vision of next generation digital infrastructures (3Cs networks), applicants should devise appropriate mechanisms for cooperation with the 3C pilot:

- To ensure the integration of requirements and specifications stemming from the 3C large scale pilots.
- To ensure the 3C large scale pilot's swift integration of the building blocks developed by the Open Internet Stack, including envisaging mechanisms for testing and integration of the solutions.

Applicants should provide concrete plans on how such work should be organised in close cooperation with the 3C large scale pilot to decide the building blocks that will be prioritised, facilitate their integration in the 3C large scale pilot and avoid any duplication of the work. If applicants opt for financial support to third parties, the solutions selected under the Open Calls should form a coherent portfolio and duplications should be avoided. The 3C CSA will ensure co-ordination and monitoring for duplication risks across the 3C projects' activities.

Applicants could also decide to select and fund third party projects, wherever required, through up to 70% of their project's budget for financial support to third parties.

If applicants opt for financial support to third parties, they should target calls towards the Open-Source communities actively influencing the course of the Internet. This action is aimed in particular at leveraging the European Open Source community – SMEs, research institutes and individual researchers and developers – with solid experience with development of solutions in line with EU rules and values. The calls should aim at improving trust, transactions, decentralisation implementing optimal balance between distribution, security (including AI for security), AI usage and energy efficiency targeting climate neutrality objectives. Applicants should then also define the mechanisms for maturing third parties' projects e.g., security and accessibility audits, packaging of the stack for easy deployment, localisation of the software in EU languages, documentation best practices, performance optimisation and advising on licensing.

Applicants should detail the path to growth for third parties' projects e.g., by actively animating communities, creating momentum among like-minded efforts, defining how

projects will gain critical mass and what services will be provided for reaching such stage. Proposals should also detail the strategy for standardisation.

In addition to contributing to the 3C large scale pilot, applicants should demonstrate how the software produced will be operationalised as a stack of open libraries accessible through a common European repository and maximising re-use, reproducibility, and resilience for adopters.

Applicants should actively manage the portfolio of funded projects and provide a coherent overall picture in relation to the 3Cs objectives, describing how mature solutions are and ensuring trusted and easy deployment capabilities for each building block through packaged stack.

Applicants should strive for identification of common tools and stimulate maximum re-use of components coming from other funded projects e.g., interoperable identity and credential management tools, common packaging solutions, tools for decentralised social media.

Applicants should seek active collaboration with other initiatives addressing internet commons of relevance to 3Cs at national, European levels and beyond Europe including with European technology industries.

Applicants should demonstrate their experience and understanding of Open-Source communities and their expertise covering the full Open-Source life cycle through proven track record including years of experience and indication of volume of Open-Source projects supported.

The Commission considers that proposals in this topic with an overall duration of typically 36 months would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other durations.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

Financial support to third parties

Third parties will be funded through projects typically in the EUR 50 000 to 150 000 range per project, with indicative duration of 9 to 12 months. The consortium should provide the programme logic for the third-party projects, managing the projects lifecycle, and provide the necessary technical and non-technical support: these tasks cannot be implemented using the budget earmarked for the financial support to third parties.

HORIZON-CL4-2025-03-DATA-12: Preparing the Advancement of the state of the art of submarine cable infrastructures (CSA)

Call: DIGITAL - CNECT
Specific conditions

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.90 and 2.10 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.10 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway, associated countries, OECD countries and MERCOSUR countries.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, shall not participate in the action.</p>

Expected Outcome: Defining specific R&I roadmap at EU level to enhance the cooperation between the EU authorities and other stakeholders and establish leadership in all relevant submarine cable technology domains (EU research roadmap on submarine cables infrastructures, i.e. including any infrastructure related to its construction, operation, maintenance and repair). This CSA should be prepared, managed and coordinated by the key stakeholders in this field, including industry, research and academic stakeholders.

The project should take into consideration the overarching challenges of:

- Reinforcing European leadership and cooperation in submarine cable connectivity, with European capabilities and best practices shaping future connectivity standards, promoting their secondary use (e.g. for a pre-warning system of natural hazard) as well as synergies and collaboration with CEF-Digital backbone projects;
- A digital and green transition towards low carbon footprint of connectivity platforms through principles of the circular economy, including reduction of pollution,

regenerating natural systems etc. while targeting long-term sustainability, resilience and security of submarine cable networks;

- Ensuring resilience for the most demanding cases requiring a very high grade of quality of service (QoS) and performances, and
- Risk evaluation, preparedness and prevention against any future natural or man-made damage or deliberate sabotage.

Against this background, the objectives of the target support actions are outlined below:

- Analysis and definition of the expected critical hardware and software components of future submarine cable infrastructure systems, and indication on where Europe should seize opportunities and strengthen its capabilities, taking into account the characteristics and architectures, including components, security, and operations of future submarine connectivity infrastructures;
- Definition of the main required R&I work and assessment of associated research investment needs related to the identified domains;
- Definition of an appropriate industry roadmap (SRIA), in close partnership with relevant EU actors both from industry and academia, indicating research & innovation actions to be undertaken in priority, their scope, and a timetable showing the main milestones and targets. The project could envisage organising thematic workshops to consult all interested communities. The results of this action will feed into the work of relevant groups working on submarine cable infrastructures, such as the European Submarine Cable Expert Group, the NIS 2 Coordination Group or the CER Group.

Scope:

- Enabling technologies applicable to submarine connectivity infrastructures and systems, including its secondary use for pre-warning systems against natural hazards, are increasingly important to ensure Europe's strategic autonomy as well as economic security. Achieving such goals requires that Europe remains at the technological edge not only with regards to the cable technology itself but also all the other critical elements composing the submarine cable infrastructure such as repeaters, landings stations, operational control centres, underwater acoustic sensor networks (UASN) or cable communications cybersecurity.
- While some of the necessary research is indirectly conducted through mainstream research activities in generic technologies (e.g., optical communications or network management software), more specific research is needed to address the particular needs and advancement of submarine cable infrastructures and systems. However, the specific research needs still need to be identified, which supports the need to develop a specific roadmap and SRIA for research and innovation in submarine cable technologies. Such research efforts may address some of the following (non-exhaustive) domains: Multi-core fibre (MCF) technology, Digital Signal Processing, repeater systems, intelligent

sensing, advanced Digital Acoustic Sensing (DAS), strain and temperature sensing, oceanographic sensors for continuous, real-time trans-oceanic measurements (monitor water body), logical layer and cable network management systems, underwater robotics to improve the construction, maintenance and repair of submarine cable infrastructures, and other innovations, such as wireless sensor networks (WSN) to monitor permanently submarine cable infrastructure and to detect possible threats.

Projects are expected to develop synergies and ensure complementarities with projects under CEF Digital, the Digital Europe Programme (DEP) and the Smart Networks and Services (SNS) Joint Undertaking.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

AI-GenAI / Data / Robotics

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-03-DATA-13: Fostering Innovative and Compliant Data Ecosystems (IA) (AI, Data and Robotics Partnership)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 7.00 and 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 45.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway, associated countries and OECD countries.</p>

	For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, shall not participate in the action.
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 6-7 and achieve TRL 8 by the end of the project – see General Annex B.

Expected Outcome: The projects are expected to contribute to the following outcomes:

- Easing the compliance process of businesses and professionals with the relevant EU legislation, in particular reporting obligations, and alleviating administrative burdens for businesses and professionals.
- Developing and integrating advanced technologies for data collection, data sharing and data analytics for simplifying and automating compliance.
- Generating, managing, and leveraging synthetic data to improve fitness for purpose; addressing limitations of real-world data, enhancing data quality, diversity, and representativeness, while mitigating bias and addressing other ethical issues.
- Ensuring broad user training and support for rolling out and scaling up “compliance and privacy by design” and the FAIR¹⁵⁰ principles in the constantly evolving regulatory landscape.

Scope: As the European Union (EU) legislation continues to expand, both in the digital (GDPR, Open Data Directive (ODD), Data Governance Act, AI Act, Data Act) and non-digital realm (e.g. green deal, due diligence, healthcare, transport), businesses and professionals face increasing challenges in maintaining compliance. Also, the complexity and volume of reporting obligations are growing, posing difficulties for both regulatory bodies to enforce laws and for entities trying to comply. These challenges underscore the need for innovative solutions to streamline compliance processes and enhance competitiveness within the EU.

Another current challenge are limitations of real-world data such as issues with availability, confidentiality, and bias. Synthetic data is becoming increasingly vital in addressing these problems. By generating and utilizing synthetic data, actions within this framework aim to enhance data quality, diversity, and representativeness, making it a crucial tool for AI-powered innovation and regulatory compliance.

Where relevant, the actions should address **cybersecurity, interoperability, reproducibility and standardization**, and/or liaise with other actions working on those aspects, in view of

¹⁵⁰ FAIR: Findable, Accessible, Interoperable and Re-usable data

facilitating effective data sharing across platforms and sectors, while ensuring an adequate level of security and protection.

Actions should provide necessary comprehensive **user training and support**, (also involving the users/stakeholders outside the project), ensuring adaptability and scalability to accommodate evolving regulations and diverse organizational needs and to raise awareness and improve understanding of relevant compliance issues. Proposals for all three areas should analyse and address the real needs of real users and stakeholders, and how these will be addressed in the proposed action. The training and user needs should be linked to tangible progress indicators in the proposal.

The proposal should clearly state (in the abstract and in the introduction) which of the following three areas it addresses. A proposal can address more than one area, but it should indicate one of them as the main focus of the proposal, and it will be evaluated accordingly under that area.

- Area 1: Actions to develop advanced compliance technology integrating AI, cybersecurity, language technologies, and privacy preservation. This framework could include the creation of NLP¹⁵¹-driven semantic analysis tools for deciphering complex legal texts and translating them into clear compliance tasks, energy-efficient neuromorphic approaches and mechanisms for optimising massive data operations, or machine learning algorithms trained on historical data to predict and mitigate potential compliance violations. With the capability to detect changes in EU legislation, these advanced AI systems and analytics tools will provide deep insights into compliance performance, risk management, and help forecast upcoming regulatory trends to strategically prepare for future requirements. For usability, it is also important that the tools can be integrated with the organisation's existing processes and systems.
- Area 2: Actions to ensure auto-compliance of data transactions and data spaces with applicable regulation (e.g. data and sectoral legislation). Actions in this area should anticipate compliance tasks within the context of Common European Data Spaces and coordinate with them as necessary. Actions in this area are expected to develop automatic or semi-automatic tools that analyse and take into account the specific architecture, governance model, exchange mechanisms, tools, data types, identity management, smart contracting, user policies and other user needs or operational features of the actual data spaces, liaising with and building on other actions working in this area, in particular the Data Spaces Support Centre.
- Area 3: Actions to generate, manage and leverage **synthetic data** in order to improve data quality, availability, representativity, fitness for purpose and compliance. The actions should in particular address the inherent shortcomings of real world data that would necessitate synthetic data (e.g. data availability, confidentiality, privacy protection, enhancing quality, diversity, representativeness, bias). Additionally, actions may target generating synthetic data for sparse or unusual domains, integrating synthetic and real

¹⁵¹ NLP: Natural Language Processing

data effectively, or advancing technological capabilities in generative models and simulation-based approaches to drive synthetic data generation forward and/or addressing or modelling rare events and complex dynamic systems. All actions under this Area are expected to address the evaluation, validation and benchmarking of synthetic data to ensure fitness for purpose and safe, ethical and compliant use of synthetic data, including the analysis and mitigation of biases inherited from the original data or introduced by the synthetic data generation process. For these purposes, collaboration with simulation/digital twins actions could be explored.

This topic implements the co-programmed European Partnership on AI, Data and Robotics.

Projects are expected to develop synergies with Digital Europe programme topics implementing Common European Data Spaces, especially the Data Spaces Support Centre (DSSC). Projects are expected to ensure complementarities with projects funded under the following topics:

- HORIZON-CL4-2024-DATA-01-01 AI-driven data operations and compliance technologies (IA).
- HORIZON-CL4-2021-DATA-01-01 Technologies and solutions for compliance, privacy preservation, green and responsible data operations (RIA).

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

HORIZON-CL4-2025-04-DATA-02: Empowering AI/generative AI along the Cognitive Computing continuum (RIA) (AI/Data/Robotics Partnership)

Call: DIGITAL - HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global</p>

	<p>context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway and the following additional associated countries: Canada, Israel, the Republic of Korea, New Zealand, Switzerland, and the United Kingdom.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.¹⁵²</p>
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3 and achieve TRL 6-7 by the end of the project – see General Annex B.

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

- **Novel AI-enabled Cloud and Edge management solutions** tailored for the processing needs of AI workloads across the cognitive cloud-edge-IoT continuum.
- Strategic industrial cooperation across the Cloud-Edge-IoT cognitive computing continuum to support future **hyper-distributed AI applications**.

¹⁵²

The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

- Seamless and trustworthy integration and interoperability across diverse computing and data environments spanning from core cloud (including HPC) to edge to IoT and across different technology stacks.
- Enhanced openness and open strategic autonomy in the evolving data and AI-economies across the computing continuum **validated through key business/societal sectors**.
- Guaranteeing a minimum level of interoperability and portability thereby facilitating European access to foreign markets.

Scope: The Cloud to Edge Continuum needs to provide seamless and trustworthy integration of diverse computing and data environments spanning from core cloud to edge to IoT and support the enormous data, processing needs, and new resource types brought by next generation AI technologies.

Different types of AI processes pose different requirements that compute infrastructures need to meet to execute them. The state-of-the-art in generative AI and large language models is heavily reliant on high-performance processing and very large AI models. Cutting-edge hardware accelerators that power these processing systems are scarce on the market and only available in highly specialised, high-performance infrastructures in certain cloud and HPC environments at considerable costs. At the same time, the requirement to gather, process, and transmit massive amounts of data to the central data processing environment remains a barrier for many AI applications. All these factors urge the emergence of efficient tools and mechanisms **to empower the distribution of AI training and inference processes throughout the computing continuum**.

Empowering the next generation AI technologies with on-demand, agile and situation-aware infrastructure that brings data- and computing power to where and when it is needed will let end-users exploit Artificial Intelligence across the computing continuum without compromising on security and trust and optimising their energy use. These **challenges** span various aspects of the continuum, including **on-device data processing, data orchestration and sharing, AI integration, decentralised intelligent management, decentralized and global optimization, energy and resource heterogeneity support, data management, security/privacy, and synergies with 5G/6G**. Addressing these challenges is crucial for realizing the vision of a cognitive cloud-to-edge continuum as a key enabler for any emerging trends such as AI/generative AI.

The Cognitive Computing Continuum could eventually be extended to **include other computational resources**, such as **HPC**, and provide abstraction layers to maximize the benefits of available hardware.

Addressing all the above complexities calls for innovative research to overcome these challenges. **The aim is to develop generic and AI-enabled cloud-edge technologies encompassing the whole computing continuum to empower the development of AI/generative AI technologies and applications**. The proposals should demonstrate the generic applicability of the proposed technological solutions across various application

domains such as but not limited to, manufacturing, healthcare, robotics, transportation and smart cities.

The following (one or more) research areas should be addressed:

- **Development of novel mechanisms for the efficient development, deployment, and operation of AI workflows** across heterogeneous and distributed infrastructures along the Edge to Cloud to HPC continuum that optimise training times, model accuracy and data management while factoring in performance metrics such as memory usage, energy efficiency, application processing and data transfer latency, and network overheads. These should factor in virtualisation and orchestration techniques that seamlessly integrate heterogeneous processor architectures and cater for the explainability of the applied cognitive optimisations.
- **Decentralised and federated computing continuum tools and mechanisms to enable distributed AI architectures.** These include scheduling, orchestration, and placement mechanisms that leverage the wide range of Edge computing environments available in the compute continuum, including on-device edge. Tools and mechanisms should take into consideration - where appropriate - data security and privacy aspects. The focus is on enhancing AI process execution through techniques such as model, data, hybrid parallelism and data compression, gossip, swarm, and federated training, or conditional computing.
- **Cloud and edge processing tools and techniques to reduce AI processing power usage and emissions across the cognitive computing continuum,** relying on hardware efficiency (for example, thanks to special-purpose accelerators and heterogeneous hardware processor architectures) and energy optimisation techniques, such as hardware and software approximation.

This topic implements the co-programmed European Partnership on AI, Data, and Robotics.

Projects are expected to develop synergies and relate to activities and outcomes of the Digital Europe Programme (DEP) and any existing or emerging Important Projects of Common European Interest (IPCEI) initiative, such as IPCEI-CIS.

All proposals are expected to share communicable results with the European R&D community, through the AI-on-demand platform, and if necessary other relevant digital resource platforms in order to enhance the European AI, Data and Robotics ecosystem through the sharing of results and best practice.

HORIZON-CL4-2025-04-DATA-03: Software Engineering for AI and generative AI (RIA) (AI/Data/Robotics Partnership)

Call: DIGITAL - HADEA
Specific conditions

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 and 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway and the following additional associated countries: Canada, Israel, the Republic of Korea, New Zealand, Switzerland, and the United Kingdom.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.¹⁵³</p>

¹⁵³

The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity,

<i>Technology Readiness Level</i>	Activities are expected to start at TRL 4 and achieve TRL 6 by the end of the project – see General Annex B.
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Expected Outcome:

- Improved methods and tools to optimally develop and deliver bias-free AI algorithms and generative AI.
- New concepts of the auto-evolution-enabled software elements that AI algorithms can autonomously select and integrate.

Scope: The latest developments in AI are demanding computation infrastructures designed to maximize the number of FLOPS. Europe has a window of opportunity to leverage open source and ensure that the European industry is at the cutting edge of these new processing infrastructures. The current methods and tools to develop and efficiently deliver AI pipelines and complex generative AI applications present several shortcomings.

Current identified challenges include the continuous management of data pipelines, novel testing methods (e.g. differential testing or improved performance testing), optimized deployment strategies (in terms of using energy efficient resources or the best performant), management of dependencies with a diverse set of types of hardware, algorithm bias and discrimination against certain groups, determined by characteristics such as gender, ethnicity, age or disability, as well as the maintenance of the effectiveness of AI applications, notably generative AI ones. The explainability of AI models is another crucial challenge that must be also tackled at the software engineering level, possibly in synergy with explainability methods at the machine learning stage. Also, large language models and foundational models require the development and operation of complex system architectures that need to handle data processing at large scale, continuous training of models and inference. Furthermore, AI pipelines and generative AI application also strongly suffer from poor protection against learning dataset poisoning, as well as prompt poisoning; software engineering methods and tools providing support to protect against those attacks are thus direly required. This presents novel challenges for developers that will need to be addressed with the development of new methods, mechanisms and tools covering the above, including neuromorphic computing, but not limited to.

The main objectives for the advancements of Software Engineering in this field are:

- Increasing the productivity of generative AI application developers, and operators, especially of foundational and language models.
- Define a reference architecture and framework for generative AI application developers to simplify integration and system modularity.
- Simplifying and automating the development and operation of such applications.

and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

- Including novel techniques for the generation of labelled training sets for reinforcement learning (RL) from human feedback, to be evaluated with corresponding RL algorithms.
- Facilitating AI progress and advancement beyond the state-of-the-art in the EU at a faster rate vis-à-vis the rest of the world and contributing to the implementation of the AI Act.
- Establishing collaboration with EU-based chips designers to maximize how the hardware resources are fully optimized with the software to develop

The proposal should address at least one use case as an industry application (e.g., automotive, health, energy, food/agriculture, etc.).

Actions could build on, provide support or seek collaboration with existing projects, develop synergies and ensure complementarities with other relevant European, national or regional initiatives currently demanding this kind of optimisations possibly in different verticals: e.g. digital twins leveraging GenAI, data quality enhancement leveraging GenAI, development of energy-efficient AI algorithms.

Communicable results should be shared with the European R&D community through the AI-on-demand platform, and if necessary, other relevant digital resource platforms to bolster the European AI, Data, and Robotics ecosystem by disseminating results and best practices.

This topic implements the co-programmed European Partnership on AI, data and robotics (ADRA), and all proposals are expected to allocate tasks for cohesion activities with ADRA, and the CSA HORIZON-CL4-2025-03-HUMAN-18: GenAI4EU central Hub.

Actions are encouraged to build on, provide support or seek collaboration with existing projects, develop synergies and ensure complementarities with other relevant European, national or regional initiatives currently demanding this kind of optimisations possibly in different verticals: e.g. digital twins leveraging GenAI, data quality enhancement leveraging GenAI, development of energy-efficient AI algorithms. In particular, proposals are encouraged to ensure complementarities with projects funded under the following topics:

1. HORIZON-CL4-2024-HUMAN-03-01: Advancing Large AI Models: Integration of New Data Modalities and Expansion of Capabilities
2. HORIZON-CL4-2024-HUMAN-03-02: Explainable and Robust AI (AI Data and Robotics Partnership) (RIA)
3. HORIZON-CL4-2023-DATA-01-01 AI-driven data operations and compliance technologies (IA)
4. HORIZON-CL4-2021-DATA-01-01 Technologies and solutions for compliance, privacy preservation, green and responsible data operations (RIA)
5. HORIZON-CL4-2021-HUMAN-01-24 - tackling gender, race and other biases in AI.

Projects are encouraged to develop synergies and relate to activities and outcomes of the Digital Europe Programme (DEP) and any existing or emerging Important Projects of Common European Interest (IPCEI) initiative.

DRAFT

Destination 4: Achieving open strategic autonomy in digital and emerging enabling technologies

Destination 4 ensures Europe's strategic autonomy while preserving an open economy in those technologies that will be key for a deep digital transformation of industry, public services and society, while fully playing its enabling role in the twin transition. As set out in the European Chips Act, the top-priorities are to i) strengthen processes undertaken at critical stages in the semiconductor and quantum chips value chain, including chip design and manufacturing technologies, and ii) address the use of new materials and green technologies, energy efficiency and the integration of circularity and life-cycle assessment.

Destination 4 will address high value-added hardware needs for core, cloud and edge, fast-sensing, low-latency and high-bandwidth data transmission, and help secure the supply of critical components for key markets, such as automotive, health, automation and mobility systems. For this purpose, significant human capacity will be required in chip manufacturing to ensure: (i) the strengthening of processes undertaken at critical stages in the value chain; and (ii) that workers can take up quality jobs created as part of these priorities, including through the activities undertaken by the joint undertaking initiative.

In addition, future needs in microelectronics (such as performance, size, cost, energy efficiency, environmental impact, new materials, concepts, architectures, integration) may also be addressed to make sure Europe's microelectronics industry remains competitive. Opportunities may come from non-volatile memories, spintronics, in-memory computing, neuromorphic and other emerging technologies. Photonics research will lead to fast and versatile sensing and imaging, and energy-efficient building blocks for networks and data centres. The cluster will also push for chip-level integration of photonics and optoelectronics.

The cloud/edge/internet of things will be transformed into an agile and situation-aware infrastructure that brings data to where and when it is needed. Within these smart digital infrastructures, end-to-end artificial intelligence, from the core to the edge and across all technology layers, will be key for on-demand supply of optimal data-, communication-, and computing resource orchestration, with optimal use of energy while preserving privacy and ensuring resilience. European sovereignty in the cloud-edge server market will be strengthened through the power of open-source software, complementing the RISC-V based European Processor Initiative that aims to increase Europe's independence in high performance computing hardware.

Cluster 4 will transform the user experience. It will push the frontiers of virtual and extended realities (VR/XR) and of open, human-centric virtual worlds for industry, entertainment and arts, public services and people alike, e.g. by leveraging social innovation. It envisages a vibrant R&I ecosystem that strategically joins-up research and development on sophisticated VR/XR optics and displays, multimodal human-computer interaction, authoring tools, real-time spatial computing, rendering, integration and application research. Improved sensing, fast processing and low-latency will be challenging for the underlying cloud/edge/Internet of things. Along similar lines, the way in which the virtual world meets the physical world will continue to evolve, thanks to all kinds of robots and other smart devices that involve self- and

context awareness, spatial intelligence, exploiting the best in bias-free AI, engineering and design for game-changing physical characteristics, functional or cognitive capabilities, acute perception, autonomy and safe interaction.

Artificial intelligence underpins many of these changes and Cluster 4 will strengthen and consolidate R&I in this area. For example, today's generative models are a preview of how virtual worlds and multimodal user-experiences could be produced on-demand. Research on core learning and analysis techniques (incremental, frugal and collaborative), as well as next generation smart robotic systems, will keep Europe at the cutting edge of AI. Artificial Intelligence is also key to keep the competitiveness and strategic autonomy of the EU scientific sector. The EU's comprehensive approach to achieving leadership in AI is reflected in its Apply AI Strategy, which aims at establishing Europe as a global leader in the development and adoption of AI. By fostering a vibrant AI ecosystem, the EU seeks to make Europe a hub for AI innovation and growth, where world-class AI models are developed and integrated into strategic sectors. This initiative is designed to drive innovation, economic growth, and competitiveness, while ensuring that the benefits of AI are shared by all. The topics related to Generative AI included in this destination will support the implementation of the GenAI4EU initiative included in the AI Innovation Package of 24 January 2024. They constitute, moreover, an integral part of the broader Apply AI strategy. By aligning these efforts with the GenAI4EU initiative and the Apply AI strategy, the EU aims to create a cohesive and coordinated approach to AI development and adoption, one that promotes European excellence and leadership in this critical field.

Europe's long-term competitiveness in the digital area requires continuous scouting and early, low-TRL cross-disciplinary work on new and emerging technologies, dissociated from the main roadmaps. This would encourage collaboration in research and cross-fertilisation between disciplines and sectors on new approaches in: (i) microelectronics; (ii) power electronics; (iii) photonics and photon/phonon/spin/electron integration; (iv) unconventional, hybrid, neuromorphic, nature-inspired or bio-intelligent paradigms; and (v) novel systems and infrastructure architectures.

Europe's strength in quantum technologies (including in quantum communications and optical satellite communications, etc.) is a strategic asset for its future security and independence. Cluster 4 supports early and mature quantum technologies and stimulates their industrial uptake, e.g. through experimentation and testing environments for integrating them into standard industrial design and manufacturing. Equally transformative, two-dimensional materials (2DM) could positively affect many industries, including ICT. While further exploring the vast range of 2DMs, Cluster 4 will also work towards completing a fully European supply chain and scaling up the development and piloting of 2DM technologies and devices for more industrial fields.

Quantum and High Performance Computing

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-03-DIGITAL-EMERGING-01: Continuation of the Quantum Technologies Flagship (CSA)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Subject to restrictions for the protection of European communication networks.</p>

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

1. Act as a global observatory of quantum technologies, systematically reporting on the latest advancements and breakthroughs occurring worldwide. Provide regular assessments to the European Commission and Member States, specifically to the Quantum Technologies Coordination Group established in line with the Quantum Declaration, offering a detailed analysis of Europe's standing relative to global competitors. This will ensure Europe can strategically respond to emerging trends and innovations.
2. Capitalize on the accomplishments and infrastructure (e.g. online presence) established by the current CSA to further elevate Europe's leadership in quantum technologies.
3. Provide comprehensive support to Flagship projects, researchers, and innovators, fostering synergies, knowledge sharing, and best practices.
4. Develop and implement targeted communication strategies to raise awareness and understanding of quantum technologies across varied audiences, including students, specialists, and the general public.
6. Promote the sustainable growth of quantum technologies in Europe by exploring new applications and markets, ensuring the field's dynamism and competitiveness.
7. Serve as a pivotal entity for coordinating efforts between the EU and Member States, especially in light of the new Quantum Declaration. This includes aligning national and European strategies and enhancing international relations to fortify Europe's stance in the global quantum landscape.

8. Assist the Flagship's governance bodies and facilitate the integration of new structures or initiatives, ensuring a cohesive and efficient approach to advancing quantum technologies in Europe.
9. Act as a globally-oriented data observatory for quantum technologies, systematically collecting data (e.g. on patents, scientific publications and the current and future evolution of markets for quantum technologies) related to the state of quantum technologies in Europe and worldwide. Once or twice a year, this data should be disseminated to stakeholders, including the Commission and Member States, as well as countries associated to Horizon Europe.
10. Propose a clear, service-oriented model detailing the CSA's offerings to various stakeholders, including research support, data business intelligence, strategic analysis, international collaboration facilitation, event organization, and communication activities.
11. Update the Strategic Research and Innovation Agenda through a community-based process involving research and industry stakeholders.

Scope: The scope of the new Quantum Flagship CSA encompasses:

1. The global observatory role of quantum technologies, systematically reporting on the latest advancements and breakthroughs occurring worldwide.
2. Fulfil the dissemination requirement of five articles every two months highlighting EU success stories in quantum technologies. These articles should be widely promoted in Europe and beyond via social media, popular newspapers, and technical magazines to ensure maximum visibility and impact.
3. Building upon the established infrastructure by the previous CSA, support the European Commission and current and future projects within the Quantum Flagship, including organisation of events and ensuring they have access to the necessary resources and expertise.
4. Developing comprehensive communication plans tailored to different target audiences, enhancing the visibility and understanding of quantum technologies and their societal implications.
5. Acting as a central hub for coordinating actions between the EU, Member States, and international partners. This involves compiling and disseminating information critical for harmonizing strategies at different levels.
6. Providing support to the Flagship's governance structures, contributing to the smooth execution of its strategic vision and operational goals. This may include aiding the establishment and integration of new bodies or initiatives.
7. Contribute to the organisation of the European Quantum Technologies Conference (EQTC). The conference is due to be hosted by the country holding the Presidency of the Council of the European Union in the third quarter of each year (2026-2029).

The Commission considers that proposals with an overall duration of typically 48 months would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other durations.

The project should aim to link to the activities of relevant standards development organisations with e.g. participation of project beneficiaries in the relevant standards technical committees. The Commission encourages the inclusion of partners with direct experience –of participation in relevant standards committees at national, European or international level(s) in project consortia.

Proposals are encouraged to build on, or seek collaboration with, existing projects and develop synergies and complementarities with other relevant European, national, or regional initiatives and funding programmes. In particular, links are encouraged with:

- the project funded under the topic HORIZON-CL4-2021-DIGITAL-EMERGING-01-32: Support and coordination of the Quantum Technologies Flagship Initiative (CSA) – QUCATS project;
- all relevant quantum technologies-related projects funded under Horizon Europe and Digital Europe, and as part of the EuroQCI initiative, EuroHPC Joint Undertaking and Chips Joint Undertaking.

Proposals should also cover synergies with other relevant European, national, or regional initiatives and funding programmes such as those mentioned above.

Proposals should also contribute to spreading excellence across Europe; for example, through the involvement of EU Widening Countries.

In this topic the integration of the gender dimension (sex and/or gender analysis) in research and innovation content is not a mandatory requirement; however, should proposers consider it to be of relevance for their proposal, they are strongly encouraged to integrate it.

HORIZON-CL4-2025-03-DIGITAL-EMERGING-02: Quantum Computing – complementing the quantum computing FPAs with the development of a technology agnostic software stack (RIA)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.

<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway and the following additional associated countries: Canada, Israel, the Republic of Korea, New Zealand, Switzerland, and the United Kingdom.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.¹⁵⁴</p>
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3-4 and achieve TRL 5-6 by the end of the project – see General Annex B.

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

¹⁵⁴

The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

1. Establishing a universal, interoperable quantum computing ecosystem that supports diverse hardware platforms through the creation of a technology-agnostic software stack.
2. Seamlessly integrating quantum computing with classical computing systems, including HPC and cloud services (including the EuroHPC Joint Undertaking's supercomputers, and the quantum computers and simulators already integrated into them), and demonstrating practical quantum computing applications by showcasing use cases that combine quantum and classical computing capabilities
3. Advancing the development of standardized software architectures, compilers, and simulators that ensure application portability and performance across different quantum computing platforms.
4. Demonstration of workflows that effectively combine quantum and classical computing to address complex computational challenges, providing clear examples of the added value of quantum acceleration or showing a quantum advantage.
5. Support for initiatives aimed at training software developers in quantum programming and developing libraries for basic quantum algorithms, including the integration of quantum error correction mechanisms.

This topic emphasizes the strategic importance of collaboration between Horizon Europe quantum computing software and hardware projects and the EuroHPC Joint Undertaking's quantum projects, including high-performance computing-quantum middleware, integration, and Quantum Excellence Centres. Successful applicants will be required to closely collaborate and agree on the interfaces for the main layers of the software stack at the beginning of their projects. It is crucial that the projects collaborate from the outset to define open interfaces for the main layers of the software stack. These interfaces should be open for consultation and incorporate input from existing initiatives to ensure they are well aligned with current developments in the field. All interface specifications should be properly documented as they will serve as the foundational basis for the development of different layers and facilitate seamless collaboration across projects.

In line with the European Commission's commitment to open access and reuse of software, when possible, all developments under this call should utilize open-source software platforms and be published in open repositories such as GitHub. Additionally, the use of appropriate software licenses, such as those listed as free by the Free Software Foundation and listed as open source by the Open Source Initiative, or under the European Union Public Licence (EUPL), is strongly recommended.

Moreover, the beneficiaries will have to ensure open access to other research outputs like data and workflows under the principle 'as open as possible and as closed as necessary' and in accordance with the FAIR (Findable, Accessible, Interoperable, Reusable) data principles.

Scope: Quantum APIs and cloud access form the transition layer between users and quantum machines in the quantum computation stack. This layer includes general-purpose quantum software development kits that are used to implement quantum algorithms for both gate-based

systems, simulators and quantum annealers. This call seeks proposals that address the creation of a cohesive software stack that is agnostic to quantum hardware, facilitating the development, testing, and deployment of quantum applications across various platforms.

Proposals are encouraged to build on, or seek collaboration with, existing projects, and develop synergies and ensure complementarities with other relevant European, national, or regional initiatives and funding programmes. In particular, links are encouraged with the following, as well as with the EuroHPC Joint Undertaking:

- HORIZON-CL4-2021-DIGITAL-EMERGING-02-17: Framework Partnership Agreement for developing large-scale quantum simulation platform technologies (FPA)
- HORIZON-CL4-2021-DIGITAL-EMERGING-02-15: Framework Partnership Agreement for developing the first large-scale quantum computers (FPA)
- HORIZON-CL4-2023-DIGITAL-EMERGING-01-43: Framework Partnership Agreement for developing large-scale quantum Computing platform technologies (FPA)
- HORIZON-CL4-QUANTUM-02-SGA - Developing large-scale quantum simulation platform technologies (SGA)
- HORIZON-CL4-QUANTUM-01-SGA - Developing the first large-scale quantum computers (SGA)

In addition, proposals are expected to develop synergies with relevant projects funded under the Digital Europe Programme (DEP).

Proposals should also contribute to spreading excellence across Europe; for example, through the involvement of EU Widening Countries.

In this topic the integration of the gender dimension (sex and/or gender analysis) in research and innovation content is not a mandatory requirement; however, should proposers consider it to be of relevance for their proposal, they are strongly encouraged to integrate it.

HORIZON-CL4-2025-03-DIGITAL-EMERGING-03: Supporting Digital Partnerships in Quantum technologies (RIA)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 2.50 and 2.70 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.

<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 2-3 and achieve TRL 3-5 by the end of the project – see General Annex B.

Expected Outcome: The overall objective of this call is to support the implementation of the EU-Republic of Korea Digital Partnership by strengthening cooperation with the Republic of Korea (ROK) in quantum technologies, in the areas identified in the Partnership.

Project results are expected to contribute to the following expected outcomes:

- Strengthening the European quantum ecosystem, enabling stakeholders to enhance quantum technologies' applications in academic, industrial, and relevant cases for the EU and ROK.
- Improving the exchange of information and expertise between EU and ROK to tackle societal challenges utilizing quantum technologies.
- Sharing best practices in deploying quantum technologies and integrating them with other technologies.
- Facilitating researcher and engineer exchanges between the EU and ROK for mutual access to quantum infrastructures.
- Enhancing international cooperation between the EU and ROK quantum communities, with a roadmap for future collaboration in targeted areas.

Scope: Proposals are expected to address quantum technology challenges in the fields of quantum communication, computing, simulation, and sensing, identifying the added value and mutual benefits for both EU and Korean partners. This includes integration across various disciplines such as physics, engineering, computer science, cybersecurity, theory, algorithms, software, manufacturing, control, and infrastructures.

Relevant technological and societal challenges to address include:

- Co-design of hardware and software to accelerate quantum computing and simulation applications, ensuring interoperability across platforms and foundational quantum algorithm and architecture theories.
- Development of secure quantum communication protocols, including quantum key distribution and beyond, with a focus on device-independent protocols, quantum network architecture, and certification of quantum states.

- Application-specific quantum sensor development, covering areas like device fabrication, characterization for purposes like navigation, imaging, and biomedical applications, and optimizing sensor control and advanced approaches.

Proposals are recommended to link to the activities of relevant standards development organisations, e.g. via participation of project beneficiaries in the relevant standards technical committees. The Commission encourages the inclusion of partners with direct experience of participation in relevant standards committees at national, European or international level(s) in project consortia.

Proposals should contribute to spreading excellence between the EU and ROK, through the balanced involvement of EU and ROK entities.

Proposals should clearly define the benefit of EU-ROK collaboration, aiming to enhance the technology readiness level (TRL) through comprehensive engineering approaches involving public and/or private partners.

Proposals should also contribute to spreading excellence across Europe; for example, through the involvement of EU Widening Countries.

In this topic the integration of the gender dimension (sex and/or gender analysis) in research and innovation content is not a mandatory requirement; however, should proposers consider it to be of relevance for their proposal, they are strongly encouraged to integrate it.

HORIZON-CL4-2025-03-DIGITAL-EMERGING-04: Post-exascale HPC (CSA)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Subject to restrictions for the protection of European communication networks.

Expected Outcome: The CSA action should be prepared, managed and coordinated by key stakeholders in the field. Project results are expected to contribute to the following expected outcomes:

- Delivery of a high-quality roadmap addressing the post-exascale HPC/AI research challenges for applications, algorithms, software, hardware and systems, including a strong emphasis on AI
- Contribution to the development of a competitive European converged HPC/Quantum/AI ecosystem, including AI Factories and future AI Gigafactories
- Interaction and collaboration with similar international efforts, ensuring alignment with AI-driven computing paradigms worldwide

Scope: Proposals are invited for a Coordination and Support Action that will guide and prepare European HPC for the post-exascale era of converging supercomputing, quantum computing and artificial intelligence worlds.

The action should bring together the key scientific and industrial players in Europe, ensuring strong AI engagement, and should liaise with the relevant international post-exascale efforts (e.g. the International Exascale Project (InPex)), the EuroHPC Joint Undertaking advisory bodies such as the Research and Innovation Advisory Group (RIAG) and the Infrastructure Advisory Group (INFRAG), the EuroHPC JU private partners (i.e. the European Technology Platform for High Performance Computing ETP4HPC, the Big Data Value Association (BDVA), and the European Quantum Industry Consortium (QuIC)), relevant EuroHPC main initiatives (e.g. the DARE Framework Programme Agreement on RISC-V processors, HPC Centres of Excellence, AI Factories, etc), the hosting entities of European AI Factories and future AI Gigafactories, and other relevant European projects and initiatives.

The action should analyse the research challenges of all relevant technologies in the post-exascale/AI era and produce and maintain a high-quality research roadmap with recommendations for research actions at the European level. Issues like hardware-supported mixed-precision, AI-driven HPC as a service, real-time HPC, next generation AI model training and inference, digital continuum, convergence of HPC/AI/Quantum/Cloud/Edge, should be part of the analysis.

The Commission considers that proposals with an overall duration of typically 24/36 months would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other durations. Only one proposal will be selected for funding.

In this topic the integration of the gender dimension (sex and/or gender analysis) in research and innovation content is not a mandatory requirement; however, should proposers consider it to be of relevance for their proposal, they are strongly encouraged to integrate it.

Projects are expected to develop synergies with relevant projects funded under the Digital Europe Programme (DEP).

Photonics

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-04-DIGITAL-EMERGING-01: Advanced sensor technologies and multimodal sensor integration for multiple application domains (IA) (Photonics Partnership)

Call: DIGITAL - HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 and 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 25.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3 and achieve TRL 7 by the end of the project – see General Annex B.

Expected Outcome: Photonic sensor technologies enable precision and versatility in sensing across multiple domains. The integration into multimodal systems enhances data accuracy, speed and reliability. Advancements in photonic sensors and their multimodal integration aim to elevate diagnostics, monitoring, and sensing by improving efficiency, performance, and reliability while reducing size and manufacturing costs and power consumption.

The development of sensor technologies and multimodal integration is closely aligned with several key EU policies. These include achieving open strategic autonomy in digital and emerging enabling technologies, enhancing Europe's technological sovereignty, and supporting the twin transition to a digital and green economy by promoting energy-efficient, competitive, and resilient digital infrastructures.

The initiative also aims to advance the digital transformation by providing access to high-quality environmental data, supporting the development of technologies for privacy, compliance, and data integrity to empower decision-making and foster a fair data economy.

Lastly, it contributes to the green transition by leveraging photonic sensor technologies for environmental monitoring and sustainable practices. It aligns with the EU's objectives for a green and digital economy, enhancing system operations and promoting innovation in eco-friendly practices, thus strengthening Europe's technological leadership for societal and economic progress.

Projects are expected to contribute to at least three of the following outcomes to fully exploit the potential of photonics for a digital, green and healthy future in Europe:

- Increase the efficiency of developed photonic sensors, surpassing existing technologies in aspects such as energy consumption, data acquisition and processing speed, as well as measurement accuracy.
- Significantly reduce the size, weight, or footprint of the sensors and quantify advancements over current technologies.
- Improve both intrinsic and extrinsic performance metrics to boost measurement accuracy for at least three use-case scenarios.
- Extend the sensing and testing capabilities of photonic sensors by linking optical with non-optical measurement parameters (e.g. for acoustic sensing or electromagnetic sensing).
- Contribute to reducing manufacturing costs and increasing resource-efficiency, while also enhancing reliability and durability of the targeted sensor systems.

They are additionally expected to:

- Help secure the open strategic autonomy for Europe by ensuring intellectual property and production means of key technologies are maintained within the EU, reducing dependencies and enhancing negotiation power in technological cooperation.
- Help maximise international competitiveness by increasing the uptake and translation of photonic technologies into new products and services, guided by key technology requirements.

Scope: The scope of this topic focuses on the advancement and application of photonic sensor technologies and their integration into multimodal systems. Proposals are expected to address the development of sensor technologies and their validation through trials in realistic use cases. This includes exploring multi-modal sensor capabilities, as well as employing sensor fusion and machine learning approaches for the analysis of sensor data. Techniques should address at least two different technology approaches, i.e. sensor modalities, of which at least one must be photonic from the following areas:

- 3D sensing and imaging such as LIDAR, optical coherence tomography (OCT), optical tomography, interferometry, photoacoustics, etc.
- Communication fiber sensing
- Chemical and gas sensing
- Bio- and medical sensing and/or imaging
- Particle sensing

- Integrated photonic solutions

In addition, the proposals could focus on developing and integrating algorithms designed to enhance the processing capabilities and decision-making accuracy of photonic sensors. These algorithms may help to optimize the interpretation of complex sensor data, enable real-time analytics, ambient intelligence and adaptive responses in dynamic environments.

Furthermore, projects should aim to provide significant improvements in one or more of the application domains listed below and to demonstrate these in at least three use case scenarios. Demonstrators would be expected to reach TRL 4-5 while the photonic techniques would be developed up to TRL 7.

This expectation underlines the call's objective to foster innovations that have a substantial and beneficial impact on society and various industry sectors:

- Healthcare (medical diagnostics, disinfection, treatment through improved imaging techniques and diagnostic accuracy).
- Transportation Safety (enhanced safety features in automotive and aerospace industries through better sensing capabilities).
- Industrial efficiency and sustainability (industrial processes such as manufacturing, quality control, increasing precision and automation through improved sensing technologies).
- Agricultural/Food Sector (precision agriculture, food safety, food waste reduction and supply chain management through improved sensing techniques for monitoring crop health, detecting contaminants, and optimizing production processes and raw material utilisation).
- Environmental Monitoring and sustainable energy (pollution monitoring, climate research, renewable energy infrastructure and natural disaster mitigation).
- Security, safety and resilience of people and critical infrastructure (face identification, long distance observation by day and night, (infra-)structural health monitoring, chemical and gas sensing, explosive detection)
- Protection and efficient operation of optical communications, risk management of data transport and processing including increased resilience to cyber security.

Proposals submitted under this topic should include a business scenario and exploitation strategy.

Research must build on existing standards or contribute to standardisation. Where relevant, interoperability for data sharing should be addressed.

All projects should build on or seek collaboration with existing projects and develop synergies with other relevant European, national or regional initiatives, funding programmes and platforms, in particular the Digital Europe Programme (DEP).

Semiconductors

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-03-DIGITAL-EMERGING-08: Strengthening the fabless Start-up and SME ecosystem in Europe (CSA)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome: Proposals should result in an enhanced and integrated support instrument for fabless startups, SMEs and mid-caps that drives collective growth and innovation. The outcomes should include:

- A sustainable and active organization or network that represents the interests of European fabless SMEs (e.g. the consortium could form an open industry association).
- A comprehensive framework facilitating dialogue between fabless SMEs and European stakeholders, including public authorities and key industrial actors, to address sector-specific needs and challenges.
- A platform providing fabless SMEs with easy access to up-to-date information on relevant calls and funding opportunities, policy and regulatory developments, as well as key technological updates.
- Active representation of fabless SMEs in high-profile forums and events, to strengthen their role and influence within the European semiconductor ecosystem.
- Targeted services to support startup acceleration and scaling, with emphasis on advanced semiconductor technologies, such as chips for AI, low-power computing, autonomous driving, integrated photonics, etc.

This CSA invites proposals that can foster a collaborative and inclusive European fabless ecosystem, capable of thriving in a dynamic global market.

Scope: Fabless semiconductor start-ups and SMEs play a key role in driving innovation and economic growth within the global technology sector. These companies, which design chips and outsource their manufacturing, are at the forefront of technological advancements, fueling innovative developments in semiconductor technologies related to AI, data processing, communications, automotive, and more. Globally, fabless companies contribute to approximately 50% of chip revenues. However, Europe's share in this crucial market is less than 1%, highlighting a significant gap that needs to be addressed to strengthen Europe's strategic autonomy and economic security. European fabless startups and SMEs often face significant challenges in accessing cohesive and timely information, financial resources, and relevant infrastructures and services. Nurturing and supporting the growth of European fabless SMEs is essential for building a competitive ecosystem that fosters rapid innovation, job creation, and sustainable growth. This Coordination and Support Action (CSA) aims to bridge this gap by providing targeted support and advocacy for Europe's fabless semiconductor start-ups, SMEs and small mid-caps, ensuring their voice is heard and their potential is fully realized.

The CSA will support European fabless start-ups, SMEs and mid-caps by establishing a coordination and knowledge hub to foster collaboration, improve access to strategic resources, and bridge the gap between them and decision-making entities. The proposed actions will aim to:

- Establish a sustainable organization or network, potentially through the formation of an open industry association, to represent the interests of European fabless SMEs.
- Promote dialogue and advocacy between fabless SMEs and European stakeholders, including public authorities and policymakers, while representing their interests with key industrial actors (such as foundries, EDA vendors, and design houses) as well as relevant initiatives of the Chips for Europe Initiative, the Chips Joint Undertaking and the IPCEIs on Microelectronics.
- Enhance the visibility and engagement of fabless start-ups and SMEs in EU policy-making to leverage their innovation potential, strengthening Europe's leadership in critical industry domains and in advanced semiconductors such as for AI, HPC, quantum, communications, advanced sensing, power systems and autonomous driving technologies and applications.
- Align with relevant support actions in key EU programmes, including coordination with the network of the European Semiconductor Competence Centres and the Design Platform under the "Chips for Europe Initiative".
- Develop a central platform (a one stop-shop) for semiconductor start-ups and SMEs that aggregates and disseminates all essential information they need (e.g., policy updates, public and private funding opportunities, and technological advancements) and facilitates access to funding and investment opportunities.

- Organize and participate in events, including workshops and conferences, to enhance the profile of fabless startups and SMEs, and strengthen their role in the broader European semiconductor ecosystem.
- Foster partnerships and innovation through networks that connect start-ups and SMEs, promoting cross-sector knowledge-sharing and joint projects to advance technological solutions and business growth.

The action should be coordinated and driven by the relevant representative European start-up and SME stakeholders operating in the field.

Links with topics in other WPs: Chips JU WP 2024 and 2025

AI-GenAI / Data / Robotics

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-03-DIGITAL-EMERGING-07: Robust and trustworthy GenerativeAI for Robotics and industrial automation (RIA) (AI/Data/Robotics & Made in Europe Partnerships)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 40.00 and 45.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 85.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway and the following additional associated countries: Canada, Israel, the</p>

	<p>Republic of Korea, New Zealand, Switzerland, and the United Kingdom.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.¹⁵⁵</p> <p>The following additional eligibility criteria apply:</p> <p>A minimum of EUR 10 million of the EU funding requested by the proposal must be allocated to financial support to third parties.</p>
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 2 and achieve TRL 6 by the end of the project – see General Annex B
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within Type A and Type B, provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up</i>	The rules are described in General Annex G. The following

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The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

<i>of the Grant Agreements</i>	<p>exceptions apply:</p> <p>Beneficiaries must provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. In derogation to article 208 EU Financial Regulation, the maximum amount to be granted to each third party can exceed EUR 60,000 and reach up to EUR 500 000. This derogation is justified by the high cost intensity of the substantial human resources, equipment or data acquisition required to successfully carry out the research and innovation activities planned in the FTSP actions.</p> <p>A given action supported by such FSTP scheme can be implemented by one third party or a by consortium of entities. The maximum amount to be granted to each action implemented by a third party or by a consortium is up to EUR 2 million.</p>
<i>Exceptional page limits to proposals/applications</i>	<p>In order to include a business case and exploitation strategy, the page limit in Part B of the General Annexes is exceptionally extended by 3 pages.</p>

Expected Outcome: Proposals are expected to address one area of the expected outcomes, either Type A or Type B. The type should be clearly identified within the proposal.

Type A GenAI4EU¹⁵⁶: Generative AI for Robotics for industrial automation. Project results are expected to contribute to all the following expected outcomes:

- Development of advanced foundation models for robotics, fostering increased autonomy and generalization capabilities, thus enabling robots to dynamically learn and comprehend their physical surroundings in real-time, ensuring adaptability and reliability across diverse and complex scenarios.
- Validation of the model through fine-tuning and downstream application to address industrial automation use-cases

Type B Trustworthy and robust generative AI for improved manufacturing. Project results are expected to further advance foundation models and reliable industrial solutions and to contribute to some of the following expected outcomes, depending on the use-cases addressed in the proposals:

- Increased productivity by high quality, flexible and resource-efficient industrial automation, both on the shop floor and in engineering/business processes;

¹⁵⁶ GenAI4EU is an initiative launched in the context of the AI innovation package, fostering the development of innovative Generative AI solutions to support the competitiveness of Europe's strategic sectors and industries: <https://digital-strategy.ec.europa.eu/en/news/commission-launches-ai-innovation-package-support-artificial-intelligence-startups-and-smes>

- Significantly improved facilitation of product and process certification and compliance assessment, as well as reliability, efficiency and sustainability of manufacturing processes, supporting easier high-mix production and manufacturing of products based on sustainable and advanced technologies; and
- Significantly facilitated installation, commissioning and decommissioning of production facilities, through tools that enable faster industrialisation of factory automation well beyond the pilot phase, while reducing the need for manual on-site interventions.
- Applicants will justify their selection by the expected business dimension of their use cases, while ensuring a critical mass of resources in the project to ensure significant outcomes in these.

Scope: Proposals integrating Generative AI in robotics and industrial automation are expected to substantially contribute to productivity gains, including for instance in engineering industries, the automotive sector, food production or other sectors related to manufacturing industries. All proposals will have to demonstrate their expected impact on the competitiveness of the selected application sector.

The budget will be split in a balanced way between area Type A and Type B defined below. Proposals should clearly identify the area they are addressing.

Proposals aiming for Type A outcomes should adhere to the Type A scope, while proposals aiming for Type B outcomes should follow the Type B scope.

Type A Scope: While it is widely acknowledged that current use of generative AI has the potential to impact certain tasks in robotics such as improving user interaction or providing explanations about why a robot system made a particular decision, these are, in general, not within the critical operating flow of a robot. To reach next level of autonomy, generative AI must also enable robots to learn from their experiences, simulate realistic environments for training in challenging conditions, and enhance planning, decision making and control while considering the physical constraints imposed both by the environment and by the physical construction of the robot. This includes integrating 'Human-in-the-loop' mechanisms, where AI systems collaborate with human operators to enhance decision-making processes and adaptability, particularly in dynamic environments.

This represents a significant advancement in robotics, requiring the development of AI models that can effectively navigate the complexities of the physical world while ensuring safety. Generative AI is expecting to bring such a step-change in robots precision, adaptability, versatility and robustness, enabling them to efficiently achieve real world tasks such as complex moves (navigation, manipulations, etc.) with higher level of autonomy and precision.

In the context of advancing robotics capabilities, the use of generative AI stands as a transformative force, amplifying robots' learning, interaction, and operational abilities. By enabling robots to learn from experiences, simulate diverse environments for training, and enhance human-robot interaction, it drives adaptability and efficiency. Additionally,

generative AI facilitates the augmentation of robot situational awareness and planning capabilities, empowering them to predict outcomes of various actions, thereby elevating their autonomy and decision-making prowess.

Training current generative AI models, in particular Large AI models, requires high volumes of data to achieve effective levels of performance. The vast amount of data required present a significant challenge when it comes to robotics. Further research is necessary to find the appropriate balance between the quality, adequacy, and volume of data with regards to the performance of the AI model. Moreover, model distillation techniques may play a key role for the portability of the generative AI solution at the edge, in power-limited devices. The training data should come from the real world or from physical aware simulations of the real world. Where relevant, in particular in the context of human interaction, training data should encompass diverse individual characteristics, such as gender, age, racial and ethnical background, to mitigate potential bias and discriminations.

Proposals should detail strategies to leverage cutting-edge generative AI techniques to enhance the adaptability and reliability of these models across complex and dynamic scenarios, as well as how to ensure human-centricity and environmental considerations. The goal is to train and fine-tune generative AI models that meet the necessary standards for ensuring the safe operation of robotics hardware. These models should empower robots to autonomously plan and execute actions while maintaining high levels of performance and generalization capabilities.

Research activities should explore the training methodologies for these foundation models, emphasizing their ability to process multimodal data and derive actionable insights to inform robotic decision-making processes.

The proposals are also expected to include the validation of the trained models through applications. Proposals should detail methodologies for conducting rigorous testing procedures, incorporating both simulation-based evaluations and physical experiments. These tests aim to evaluate the performance and scalability of developed foundation models.

The research will be driven by impactful scenarios defined by major manufacturing industry players who should be well integrated in the consortium. They should be deeply involved in the proposed work in order to provide the use-case, the corresponding data and they will play an important role to accompany the validation process. They will define a number of representative real-world use-cases with gradually increased level of complexity to drive the technology development. They will provide existing relevant data and collect further data necessary to train and fine-tune the models, but also to validate the solutions. Given the sensitivity of sharing industrial data, manufacturers present in the consortium have to define upfront mechanisms to collectively provide and pool a sufficiently large dataset for training the models (this might involve a trusted third party as intermediary), ensuring sufficient quality and quantity of data needed to train the models. If necessary, they will have to put in place mechanisms to acquire data from sources outside the consortium.

Proposals are expected to enhance the accuracy and robustness of generative AI systems in robotics, ensuring that the solutions developed are trustworthy and reliable in their applications, hence in line with the AI Act requirements.

Proposals should address both the safety of robotic operations, ensuring protection against physical risks, and cybersecurity measures to safeguard against digital threats and ensure system integrity.

The emphasis lies in creating and disseminating general-purpose models and tools rather than being limited to narrowly focused solutions. Projects should also build on or seek collaboration with existing and upcoming projects and develop synergies and ensure complementarities with other relevant European (e.g. projects funded under HORIZON-CL4-2024-HUMAN-03-01: Advancing Large AI Models: Integration of New Data Modalities and Expansion of Capabilities), national or regional initiatives, funding programmes and platforms.

Type B Scope:

The objective is to enhance productivity and provide a competitive advantage to EU industry in the transition towards more sustainable, zero-carbon production, addressing the uncertainties and tensions on supply chains and the lack of highly-skilled workers. A new generation of digital technologies will integrate generative Artificial Intelligence, robotics, and advanced human interfaces in industry-grade applications with a high degree of autonomy. This will enable the development, production, and operation of complex and advanced high-tech products at lower cost while improving sustainability and flexibility, ultimately becoming a powerful tool for accelerating innovation in both processes and products.

The manufacturing sector should strongly benefit from increased levels of automation made possible by breakthroughs provided by AI, in particular by the family of technologies known as generative AI, including (e.g.) AI foundation models, large language models, transformers, multimodal generative AI. The main objective of this Type B is the development of Generative AI solutions dedicated to the manufacturing sector and making use of manufacturing data available in production lines.

Proposals should address at least one of the following use-cases:

- 1) Robustness and trustworthiness of digital technologies and data management at industry-grade quality, to raise the automation levels on production sites and across industry and supply chains;
- 2) Enhanced product and process qualification/certification and compliance assessment through higher levels of automation, digitalisation and data management, taking into account related requirements;
- 3) Automation of manufacturing processes to achieve higher reliability, efficiency and sustainability;

4) Automated tools for fast and large-scale deployment and reconfiguration of production assets and for rapid innovation cycles.

Proposals should accomplish these objectives exploiting the most suitable approach(es) among the ones described below:

- The integration of applications exhibiting advanced developments of generative AI model(s) specifically designed for manufacturing, providing measurable advantages in one of more of these key areas: manufacturing cost, increased productivity, quality, flexibility, resilience, sustainability, circularity, time to market and usability. Applications can target factory-floor operations and/or management of data, knowledge and documentation associated to products and production (for use-case 1 or 2);
- Development and integration of digital production systems capable of significantly increasing productivity and managing high-mix production with close to zero time needed for re-purposing and capability to manage different mixes of materials and components (for use-case 3);
- Development of deployment tools to automate the management of production lines, namely through automatic configuration, integration with legacy systems, placement of data translators and connectors, and deployment of machines and sensors on the shop floor (for use-case 4).

Proposals should indicate which approach they are targeting. Proposals may combine several approaches above, indicating which is the main approach, provided there is added value in such a combined approach; arbitrary combinations without integration are excluded.

The use of generative AI techniques is encouraged for all the approaches. The applicants will specifically describe how they will secure the acquisition of quality manufacturing data from real-world industrial use cases of industry partners or companies outside the consortium in the context of the data volume necessary to train and finetune the models used in the proposal.

Type A and Type B

For both Type A and Type B projects, proposal should allocate up to EUR 30 million towards the development of the foundation model. Each project is anticipated to focus on up to six use cases.

A minimum of EUR 10 million of the proposal budget must be allocated via FSTP for the fine-tuning phase. This phase aims to create Generative AI applications tailored to impactful industry-driven use cases.

- FSTP may be foreseen for up to EUR 2 million per use case, either for a single company (including SME/Start-up), user industry providing their data and use-case, or to a small consortium complementing such user industry company with one or two additional partners, such as AI developer/integrator. Such FSTP initiatives will develop mini-projects, working in close collaboration with the consortium partners, that will dedicate

sufficient resources to support such FSTP projects, in order to develop advanced applications and demonstrate with quantitative KPIs the power of Generative AI solutions. These mini-projects will include data preparation, fine-tuning, validation of the Generative AI solution in the selected impactful use-cases.

Proposed projects should aim to develop models that align with European values and principles and regulation, including the AI Act. Research should build on existing standards or contribute to standardisation, particularly addressing the needs and requirements of the industry.

Where relevant, interoperability for data sharing should be addressed, focusing on open specifications and standards, enabling effective cross-domain data communities, and new data-driven markets.

If high computing resources are necessary, for both Type A and Type B proposals the primary source of computing resources for pretraining should be sought from external high-performance computing facilities such as EuroHPC or National centres. The proposal should describe convincingly the strategy to access these computing resources.

When possible, proposals should build on and reuse public results from relevant previous funded actions. Additionally, proposals should leverage the tools available for the AI and robotics community on the AI on demand platform. Communicable results should be shared with the European R&D community through the AI-on-demand platform, and if necessary, other relevant digital resource platforms to bolster the European AI, Data, and Robotics ecosystem by disseminating results and best practices.

This topic implements the co-programmed European Partnerships on AI, Data, and Robotic (ADRA) and Made in Europe and all proposals are expected to allocate tasks for cohesion activities with ADRA and the CSA HORIZON-CL4-2025-03-HUMAN-18: GenAI4EU central Hub.

Proposals should also build on or seek collaboration with existing projects and develop synergies with other relevant International, European, national or regional initiatives.

HORIZON-CL4-2025-03-DIGITAL-EMERGING-09: Challenge-Driven GenAI4EU Booster (RIA) (AI/Data/Robotics Partnership)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 15.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 45.00 million.

<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway and the following additional associated countries: Canada, Israel, the Republic of Korea, New Zealand, Switzerland, and the United Kingdom.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.¹⁵⁷</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve at least at TRL 3 and achieve at least TRL6 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering the different strategic sectors,</p>

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The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

	grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within (i) the aerospace sector, (ii) the pharma/drug development sector, and (iii) the telecommunication sector, provided that the applications attain all thresholds.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Grants awarded under this topic will be linked to the other actions granted under this topic. A collaboration agreement will required.</p> <p>Beneficiaries must provide financial support to third parties. The support to third parties can only be provided in the form of grants. In derogation to article 208 EU Financial Regulation, the maximum amount to be granted to each third party can exceed EUR 60,000 and reach up to EUR 250 000 per competing solution. This derogation is justified by the substantial resources required to successfully carry out the challenges planned in the project in the stage 2, that should be substantiated in the proposals. This amount is granted at the end of the first stage of the challenge to the 20 winning solutions, as a grant to prepare for the stage 2 of the challenge.</p> <p>Each competing solution to be developed in stage 2 is proposed either by a single start-up/SME or a small team of organisations built around such start-up/SME, therefore the EUR 250 000 is distributed accordingly.</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Significant technology progress and innovation through challenge-driven approach in the fields of aerospace, pharma/drug development or telecommunication networks.
- Increased competitiveness and visibility of the Generative AI community in Europe, in demonstrating their capability to achieve challenging tasks within the aerospace, pharma/drug development or telecommunication sectors.
- Increased adoption of Generative AI in aerospace, pharma/drug development or telecommunication networks through tangible progress and achievement demonstrated via the challenge-driven process.

Scope: Generative AI (GenAI) promises to transform most industry sectors. This challenge-driven initiative aims to boost both Europe's developer community and the adoption of powerful trustworthy generative AI solutions in the strategic sectors of aerospace, pharma/drugs and telecommunication networks, key for their competitiveness. In pharmaceuticals, it can, for instance, accelerates drug design by rapidly creating target-

specific molecules, reducing development time from years to seconds, and potentially preventing prolonged health crises like COVID-19. In aerospace, generative AI can for instance optimize aircraft design, streamline manufacturing processes, predict maintenance needs through sensor data analysis, route optimisation, and enhance pilot training with diverse, realistic simulations. By embracing generative AI, telecom companies can position themselves at the forefront of a new era of intelligent and automated telecommunications. Specific use-cases include for instance network management, network optimization, network slicing, network healing, predictive maintenance, network mapping and optimization.

Each proposal should focus exclusively on one of the three key sectors mentioned above: aerospace, pharma/drug development, or telecommunications and clearly specify which sector it addresses. Each proposal is expected to focus primarily on the definition, the organization of a multi-stage competition in the chosen sector, as well as the accompanying support to the companies/teams taking part in the challenges, and related activities to maximise the impact of the action.

User industry companies from the strategic sector targeted by the proposal should be core partners in the consortium. They should demonstrate a genuine interest in the projects results and therefore support the challenge participants - in order to reach the most powerful and exploitable results benefitting their industry. The expected results are pre-competitive but the proposal must include a draft exploitation plan outlining commitments on future exploitation. The consortium is responsible for the various stages of the challenges and should provide the necessary support resources during each stage of the competition, including technical assistance and business support to develop an exploitation strategy, but most importantly, provide the data necessary to fine-tune models and build powerful solutions meeting industry needs.

Proposals should be driven by impactful use-cases where generative AI can make the difference: a number of industries from the targeted sector are expected to join forces to define challenging problems to solve with GenAI solutions, which then drive the rest of the project. Based on such challenges, the consortium organises a multi-staged competition with an increasing level of complexity. In the first two stages, third parties, either single companies (typically start-ups or SMEs) or small team of organisations built around such start-ups/SMEs, compete to address the challenges with GenAI solutions. After these stages, the solutions retained for the last stage will be invited to join the consortium, as full beneficiaries.

For each proposal:

- Stage 1: a challenge, open to all, will allow to select for stage 2 the 20 highest ranked solutions, according to a pre-defined selection process and criteria. Each solution competing for the challenge can be submitted either by a single start-up/SME, developer of GenAI solutions, or a small team of organisations built around such start-up/SME
- Stage 2: the 20 solutions selected from stage 1 receive EUR 250 000 FSTP funding, in form of a grant, in order to address the challenge set for this stage by the consortium. At

the end of stage 2, the 4 highest ranked competing solutions will be selected for the next stage according to a pre-defined selection process and criteria.

- Stage 3: after the end of stage 2 and the corresponding FSTP scheme, the 4 selected solutions will be invited to join the consortium and receive EUR 2 millions grants each (as part of the eligible costs of the grant agreement) to prepare for the grand finale. The consortium should define measures to maximise the impact for the team winning the grand finale at the end of the third stage, and maximise the uptake of their solutions (for instance, the best performing team could be offered the opportunity to conclude partnerships or contracts with the user industries leading the consortium. Measures to support the broad uptake of their solutions in the whole sector should also be considered).

Such multi-staged scheme is expected to be implemented in parallel by the successful proposals, each addressing a different sector.

Each proposal, involving several major industry players, should define a clear methodology to implement the various steps of the approach, define the specifications of the stages of the competitions, timelines, targets, KPIs, a solid evaluation methodology including evaluation criteria. The main information should be in the proposal, even if refinements could be further developed during the project. The proposers will also be in charge of implementing the evaluation methodology, and providing the necessary infrastructure/technical support for the participants to the challenges. The consortium members are also responsible for ensuring high visibility of the competitions, including possible sponsorships.

The actions selected from this call, each addressing one of the three targeted sectors, are expected to collaborate among themselves, in order to make economies of scale in sharing best practices, defining processes for organising the challenges, ensuring efficient monitoring, organising dissemination and communication activities, etc. Such collaboration among the linked actions is expected to be formalised by a collaboration agreement, after the Grant Agreement signature.

For each proposal, an amount of EUR 5 millions is foreseen to be distributed among the winners of stage 1, in form of FSTP grants, in order to prepare for stage 2. In addition, a budget of EUR 8 millions is reserved in the initial grant, to carry out the stage 3 of the challenge. The proposal is expected to make the case for such investment in defining the objectives with sufficient level of information, even if the details are to be further elaborated in the course of the project. Such amount will be distributed equally among the 4 winning teams of the stage 2, who will be invited to join the consortium as beneficiaries to develop further the solutions and compete for the stage 3 of the challenge.

Visibility would be important; therefore dissemination and communication campaigns are key. The proposers are also encouraged to seek sponsorship, which would be key for the visibility and prestige of their challenge, and to attract the best developers from the EU and associated countries to compete, particularly SMEs and startups, alone or within a team competing for the challenges.

All proposals are expected to incorporate mechanisms for assessing and demonstrating progress, including qualitative and quantitative KPIs, benchmarking, and progress monitoring. This should include the methodology to accompany the challenge participants to the various stages during the project, and the assessment methodology during the various selection stages. As part of the KPIs, efficiency gains from Generative AI should be considered, to maximize broader impact.

When possible, proposals should build on and reuse public results from relevant previous funded actions. Communicable results should be shared with the European R&D community through the AI-on-demand platform, and if necessary, other relevant digital resource platforms to bolster the European AI, Data, and Robotics ecosystem by disseminating results and best practices.

This topic implements the co-programmed European Partnership on AI, data and robotics (ADRA), and all proposals are expected to allocate tasks for cohesion activities with ADRA and the CSA HORIZON-CL4-2025-03-HUMAN-18: GenAI4EU central Hub.

Proposals should also build on or seek collaboration with relevant projects¹⁵⁸ and develop synergies with other relevant International, European, national or regional initiatives.

HORIZON-CL4-2025-04-DIGITAL-EMERGING-04: Assessment methodologies for General Purpose AI capabilities and risks (RIA) (AI/Data/Robotics Partnership)

Call: DIGITAL - HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global</p>

¹⁵⁸ In particular, proposals in telecommunication should exploit potential synergies with projects funded under HORIZON-CL4-2025-03-DATA-08, HORIZON-CL4-2025-03-DATA-09 and HORIZON-CL4-2025-04-DATA-02; proposals in pharma/drug should exploit potential synergies with relevant projects from Cluster 1 and IHI Innovative Health Initiative; proposals in the aerospace should exploit potential synergies with relevant projects from the clean aviation JU and other similar projects/initiatives.

	<p>context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway and the following additional associated countries: Canada, Israel, the Republic of Korea, New Zealand, Switzerland, and the United Kingdom.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.¹⁵⁹</p>
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 2 and achieve TRL 5 by the end of the project – see General Annex B.

Expected Outcome: Project results are expected to contribute to some of the following expected outcomes:

- New assessment and validations methodologies developed allowing to evaluate General Purpose AI (GPAI) models, including multimodal systems, and systems' capabilities and risks.
- Use of the research outcomes by GPAI providers, policymakers, public institutions, and other relevant stakeholders to evaluate GPAI models and systems' capabilities and risks.

¹⁵⁹

The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

- Support to the AI Office in its function to conduct evaluations of general purpose AI models with a view to enforce the AI Act' rules for general purpose AI models and facilitate self-evaluation for GPAI model developers to ensure compliance with AI Act requirements.

Scope: The rapid advancement of artificial intelligence (AI) has led to the development of increasingly sophisticated general-purpose AI (GPAI) models and systems. These models, such as large language models and multimodal AI systems, demonstrate remarkable capabilities across a wide range of tasks. However, assessing the capabilities of these models remains a significant challenge. Traditional evaluation methods often fail to capture the full spectrum of abilities exhibited by GPAI models and systems. Therefore, there is a pressing need for the development of ***new assessment frameworks, methodologies and tools*** that can comprehensively evaluate these models in terms of their trustworthy and ethical behaviour and operation, ensuring their reliability, fairness, and alignment with human values.

This topic aims to develop robust assessment tools, techniques, and benchmarks specifically designed to rigorously evaluate GPAI models and systems, including multimodal systems. Proposals should cover one or more of the following research areas:

- Innovative methods for proactively identifying and forecasting emergent capabilities in GPAI models and systems. This encompasses the identification of capabilities with both beneficial and potentially detrimental uses.
- Assessment of GPAI capabilities with a significant economic impact or potential for misuse. This includes assessing capabilities that drive beneficial innovation and societal good, as well as evaluating potential risks in areas such as chemical, biological, radiological, and nuclear (CBRN) hazards or cybersecurity threats.
- Developing assessment techniques that illuminate the underlying mechanisms of emergent capabilities in AI systems, emphasising interpretability and explainability.

Projects should generate example benchmark tests to examine trained AI models, systematically uncovering latent capabilities. These benchmarks will be made available to GPAI providers, policymakers, and other relevant stakeholders to implement robust evaluation tools.

This topic strongly encourages the formation of interdisciplinary teams combining the necessary technical expertise. Such a collaborative approach will ensure that assessments accurately capture real-world use cases, including capabilities elicitation techniques, and that the developed frameworks, methodologies and tools are responsive to the concerns of all relevant stakeholders.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals must adhere to Horizon Europe's requirements regarding Open Science. Open access to research outputs should be provided unless there is a legitimate reason or constraint; in such cases, the proposal should detail how GPAI providers, policymakers, and other stakeholders will access the research outcomes.

All proposals are expected to incorporate mechanisms for assessing and demonstrating progress, including qualitative and quantitative KPIs, benchmarking, and progress monitoring. This should include participation in international evaluation contests and the presentation of illustrative application use-cases that demonstrate concrete potential added value. Communicable results should be shared with the European R&D community through the AI-on-demand platform, and if necessary, other relevant digital resource platforms to bolster the European AI, Data, and Robotics ecosystem by disseminating results and best practices.

This topic implements the co-programmed European Partnership on AI, data and robotics (ADRA), and all proposals are expected to allocate tasks for cohesion activities with ADRA and the CSA HORIZON-CL4-2025-03-HUMAN-18: GenAI4EU central Hub.

Proposals should also build on or seek collaboration with existing projects and develop synergies with other relevant International, European, national or regional initiatives. Regarding European programmes, projects are expected to develop synergies and complementarities with relevant projects funded under Horizon Europe but also under the Digital Europe Programme (DEP).

HORIZON-CL4-2025-04-DIGITAL-EMERGING-05: Soft Robotics for Advanced physical capabilities (IA) (AI/Data/Robotics Partnership)

Call: DIGITAL - HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 4 and achieve TRL 7 by the end of the project – see General Annex B.

Expected Outcome: Increased exploitation of novel materials, design methods, and control techniques for soft robotics, enabling the creation of inherently safe and versatile robotic systems with applications in various industries, including healthcare, maintenance, manufacturing, and transportation.

Scope: Soft robotics¹⁶⁰ represents an important avenue to advance robotics, particularly for enhancing safety and physical interaction. Its potential lies in creating systems with intrinsic and functional safety, capable of securely interacting with humans across various scenarios. By using compliant designs, these systems overcome the limitations of rigid robotic systems, such as limited adaptability and reduced safety around humans. Novel design methods, the use of smart materials, deformable physical architectures, and bioinspired approaches are key to improving robotic performance. However, significant challenges remain in learning, modelling, simulation, control, actuation, sensing, and the integration of soft electronics.

To address this, proposals should focus on exploiting novel materials and design methods for non-rigid structures, along with advanced control techniques for soft robotic systems.

Proposals should cover one or more of the following areas:

- Exploitation of novel materials suited to developing robotic systems, both as the main structure and of manipulators and end effectors. These may encompass passive and active materials, and combination materials with specific properties.
- Design methods for non-rigid structures and the means to accurately and sense position where this may no longer involve fixed rotational or linear links
- Control methods for structures built from novel and soft materials or for structures that emulate rigid structures using soft materials.

The proposals should include at least three different demonstrators from different sectors that clearly show the advantage of soft robotics in the context of some chosen application scenarios. The objective is to develop and disseminate general purpose tools and systems, therefore the results should not be limited to the demonstration scenarios selected in the proposals to demonstrate the technological progress.

All proposals are expected to incorporate mechanisms for assessing and demonstrating progress, including qualitative and quantitative KPIs, benchmarking, and progress monitoring. When possible, proposals should build on and reuse public results from relevant previous funded actions. Communicable results should be shared with the European R&D community through the AI-on-demand platform, and if necessary, other relevant digital resource platforms to bolster the European AI, Data, and Robotics ecosystem by disseminating results and best practices.

This topic implements the co-programmed European Partnership on AI, data and robotics (ADRA), and all proposals are expected to allocate tasks for cohesion activities with ADRA.

¹⁶⁰ soft robotics concerns the design, control, and fabrication of robots composed of compliant materials, instead of rigid links. Hence such robots can be composed of rigid parts linked by compliant links

Proposals should also build on or seek collaboration with existing projects and develop synergies with other relevant International, European, national or regional initiatives.

HORIZON-CL4-2025-04-DIGITAL-EMERGING-07: Enhanced Learning Strategies for General Purpose AI: Advancing GenAI4EU (RIA) (AI/Data/Robotics Partnership)

Call: DIGITAL - HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 15.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway and the following additional associated countries: Canada, Israel, the Republic of Korea, New Zealand, Switzerland, and the United Kingdom.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication</p>

	networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees. ¹⁶¹
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 2 and achieve TRL 5 by the end of the project – see General Annex B.

Expected Outcome: Project results are expected to contribute to some of the following expected outcomes:

- Development of General Purpose AI (GPAI) models and architectures demonstrating enhanced capabilities, such as formal reasoning, mathematical problem-solving, confidence level estimation, long-term planning, and seamless adaptation to dynamic and non-stationary environments.
- Innovative learning approaches combining self-supervised learning with hybrid learning, active learning, reinforcement learning, transfer learning, relational learning or continual learning and evolutionary learning.
- Theoretical insights to advance the understanding of synergies between self-supervised and complementary learning paradigms in GPAI model development.

Scope: Current large-scale AI models have demonstrated remarkable capabilities that have transformed numerous fields. They excel at tasks like natural language processing, image generation, and playing complex games. However, despite these successes, current models often struggle in several key areas. They lack the adaptability to seamlessly adjust to changing conditions in real-world environments. Additionally, their reasoning abilities remain limited, when facing complex tasks that require logical deduction, mathematical problem-solving, or multi-step planning. Moreover, current GPAI models frequently fail to recognise their own limitations, leading them to generate erroneous outputs when presented with queries outside their domains of knowledge. These limitations underscore the need for advancements in General Purpose AI (GPAI) that go beyond pattern recognition and towards robust, adaptive systems capable of a wider range of intelligent behaviours, for example, taking inspirations from biological and collective systems.

To push the boundaries of current AI technology, this topic seeks the development of groundbreaking GPAI models that combine self-supervised learning with complementary

¹⁶¹ The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

learning strategies. These strategies include hybrid learning, which integrates symbolic reasoning and knowledge representation; active learning, which allows models to actively seek information to improve their performance; reinforcement learning, which enables models to learn through interaction with their environment; relational learning, which focuses on learning from relational data structures; continual learning, which allows models to continuously adapt and acquire new knowledge without forgetting previous tasks; and evolutionary learning, which draws inspiration from biological evolution to optimize model architectures and parameters; and physics-based learning, which considers physical properties in the models' architectures. By leveraging these complementary approaches, the aim is to create GPAI models that exhibit enhanced capabilities, overcome existing limitations, and pave the way for a new generation of intelligent systems capable of tackling complex, real-world challenges.

This topic prioritizes proposals that explore innovative approaches to developing GPAI models, focusing on at least one of the following key research areas:

- **Hybrid Learning Architectures for Advanced Reasoning:** Development of architectures integrating self-supervised learning with symbolic reasoning, knowledge representation, and neuro-symbolic methods to foster robust reasoning, complex planning, and problem-solving abilities within GPAI.
- **Continual and Evolutionary Learning for Dynamic Environments:** Research on paradigms enabling GPAI models to seamlessly adapt, learn from changing conditions, and retain knowledge essential for operation in dynamic, real-world environments.
- **Reinforcement Learning Integration:** Research on the fusion of self-supervised learning and reinforcement learning to overcome challenges like non-stationary data, algorithm sensitivity, and computational cost.
- **Explainable AI and Trustworthy Decision-Making:** Integration of robust XAI methodologies, exploring causal inference and counterfactual reasoning techniques to enhance transparency, accountability, and responsible use of GPAI models in alignment with European values and principles.
- **Other Novel Paradigms:** Research on the combination of self-supervised learning with other learning paradigms, such as active learning, relational learning, and embodied learning, to equip GPAI models with new advanced capabilities.

Proposed projects should aim for a balanced approach between theoretical advancements and practical applications, with a strong emphasis on the development of GPAI models that align with European values and principles, including the AI Act.

The potential impact of this research extends beyond scientific advancements, as it has the potential to transform key European industries and sectors, including advanced robotics, personalized healthcare, mobility, manufacturing, sustainable energy solutions, and the scientific sector, and to contribute to the EU climate neutrality objective through energy

efficiency. Successful projects will contribute to the development of GPAI models that enhance productivity, improve decision-making, and foster innovation across a wide range of domains.

This topic strongly encourages the formation of interdisciplinary teams combining the necessary technical expertise. Such a collaborative approach will ensure that assessments accurately capture real-world capabilities and risks, and that the developed tools are responsive to the concerns of all relevant stakeholders.

Proposals must adhere to Horizon Europe's requirements regarding Open Science. Open access to research outputs should be provided unless there is a legitimate reason or constraint.

All proposals are expected to incorporate mechanisms for assessing and demonstrating progress, including qualitative and quantitative KPIs, benchmarking, and progress monitoring. This should include participation in international evaluation contests and the presentation of illustrative application use-cases that demonstrate concrete potential added value. Communicable results should be shared with the European R&D community through the AI-on-demand platform, and if necessary, other relevant digital resource platforms to bolster the European AI, Data, and Robotics ecosystem by disseminating results and best practices.

This topic implements the co-programmed European Partnership on AI, data and robotics (ADRA), and all proposals are expected to allocate tasks for cohesion activities with ADRA and the CSA HORIZON-CL4-2025-03-HUMAN-18: GenAI4EU central Hub.

Proposals should also build on or seek collaboration with existing projects and develop synergies with other relevant European, national or regional initiatives, funding programmes and platforms. Regarding European programmes, proposals are expected to develop synergies and complementarities with relevant projects funded under Horizon Europe but also under the Digital Europe Programme (DEP).

Artificial Intelligence in Science

Proposals are invited against the following topic(s):

HORIZON-CL4-INDUSTRY-2025-01-DIGITAL-61: AI Foundation models in science (GenAI4EU) (RIA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.

<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 1 and achieve TRL 4 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio of foundation models from a variety of disciplines, grants will be awarded to applications not only in order of ranking, but also to at least two projects in domain A, and at least one project in each one of domains B, C and D in the scope of this topic, provided that the application attains all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁶².</p>

Expected Outcome:

- Accelerate research and development in science, with focus on the domains of a) materials science, b) climate change science, c) environmental pollution science (including PFAS) and d) agricultural science ;
- Advance AI technology (not limited to Generative AI) tailored for scientific needs and potentially adaptable to other tasks in the area of application;
- Contribute to the development of foundation models in the areas of application, and pave the way for future funding of foundation models in a broader range of scientific disciplines;
- Advance solutions to societal or scientific challenges;
- Bridge existing knowledge gaps and induce interdisciplinarity by design across different fields necessary to advance the area of application; and
- Support open-source and open science, especially for research communities with limited access to modern AI tools.

¹⁶² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope: Foundation models in science are an evolving idea in the scientific community and go beyond the Generative AI trend¹⁶³. The purpose of this topic is to tap into their potential, and to advance the development of AI technology specifically tailored for the needs of science.

A foundation model¹⁶⁴ can integrate information from various modalities of data. This model can then be adapted to a wide range of downstream, more specialized tasks. To build downstream applications, the foundation model is fine-tuned with additional training and task-specific examples. Therefore, a foundation model is itself incomplete but serves as the common basis from which many task-specific models can be built via adaptation.

In science, such foundation models could be trained on data from a specific scientific field and then be fine-tuned for a variety of tasks and used by a wider community in the field.

Proposals should address **one of the following scientific domains**:

- (A) Materials science: the development of new, innovative and advanced materials is essential for EU's economic security and for achieving a competitive and sustainable industry (especially sectors such as energy, mobility, construction, health and electronics). Employing AI in the process of materials design, characteristics and discovery could significantly accelerate and scale potential innovative solutions.
- (B) Climate change science: advancing climate research is critical for achieving the EU's climate neutrality and resilience goals. AI foundation models can contribute to more accurate insights into climate dynamics, enhanced predictions of extreme weather events, regional impacts and the evolution of climate tipping points.
- (C) Environmental pollution sciences: advancing environmental sciences can support the detection and characterisation of pollution sources, as well as their pathways, distribution and impacts to the environment and human health. This is particularly relevant in the case of pollutants of concern, emerging and/or less known pollutants.
- (D) Agricultural sciences: advancing agricultural sciences research is critical to achieve a competitive, resilient and sustainable agricultural system. AI foundation models can contribute to enhance crop, livestock, soil and water management.

Proposals should focus on 1) developing foundation models (not limited to Generative AI) for science in the chosen domain; 2) showing a foundation model's usefulness by adapting it to

¹⁶³ Some examples in science include: Foundation model in materials science ([\[2401.00096\] A foundation model for atomistic materials chemistry \(arxiv.org\)](#)), Helmholtz Foundation Models Initiative ([Helmholtz Foundation Model Initiative - Helmholtz Home](#)), The Trillion Parameter Consortium (<https://www.anl.gov/article/new-international-consortium-formed-to-create-trustworthy-and-reliable-generative-ai-models-for>), NASA ([NASA and IBM Openly Release Geospatial AI Foundation Model for NASA Earth Observation Data | Earthdata](#)), the University of Michigan ([Scientific Foundation Models \(scifm.ai\)](#))

¹⁶⁴ Foundation models is a term defined by the Center of Research on Foundation Models of Stanford University in: "On the Opportunities and Risks of Foundation Models", <https://arxiv.org/pdf/2108.07258.pdf>

subtasks/scientific problems in the chosen domain; and 3) illustrating other possible areas of application.

The foundation models should provide researchers with access to essential AI-enabled capabilities for scientific discovery; employ the machine learning algorithms, models and architectures best suited for the chosen domain; be adaptable to different problems in the domain¹⁶⁵; and be based on a robust and reliable architecture, as any potential errors and problems would be propagated to the downstream applications.

The foundation models should be placed at the disposal of the scientific community as open models, including the source code and, where possible, training datasets and other associated assets needed for full reusability of the foundation models (unless justified otherwise). This will serve a wider scientific community, thus broadening access to such scientific infrastructure and facilitating the use and adaptation of the model to different problems. Proposers should provide a clear documentation on the use and limitations of the model, alongside case studies demonstrating the model's application to a variety of tasks/problems in the chosen domain.

Multidisciplinary research activities should involve both AI and domain scientists, and address some of the following:

- Conceptualisation and planning: the scope, objectives and expected outcomes of the foundation model;
- Suitable interfaces for domain experts without computer science background to contribute to and utilise the outcomes;
- Data identification, collection and management of (preferably diverse, multimodal) datasets through semantically annotation data schemas;
- Model development, validation, testing under relevant operational and environmental conditions (such as thermal gradients, fatigue, corrosion, etc.) and, as appropriate, model evaluation and benchmarking, for example DOME¹⁶⁶;
- Integration of domain knowledge into the model (for example through machine readable representations like RDF (Resource Description Framework)).

Proposals should:

- Prove access to high quality (multimodal) data needed for the development of the model. If in the process of developing the model, there is a need to create new data sets or adapt existing ones, they should follow the FAIR¹⁶⁷ principles. Describe the data curation and quality control procedures that will be used to ensure the accuracy, completeness, and consistency of the training data.

¹⁶⁵ An example in materials science, for inspiration only: [*2401.00096.pdf \(arxiv.org\)](https://arxiv.org/abs/2401.00096)

¹⁶⁶ <https://dome-ml.org/>

¹⁶⁷ Findable Accessible Interoperable Reusable data.

- Contribute to efforts to reach common standards for data formats, metadata, taxonomies and ontologies.
- Demonstrate a strategy¹⁶⁸ to access the computational resources needed for model training, evaluation/testing and inference.
- Propose a model architecture that is designed with transparency in mind
- Ideally, employ methodologies for integrating domain/interdisciplinary knowledge into the model and seek synergies with solutions that facilitate the managing and making sense of vast amounts of data (for example knowledge graphs).
- Identify at least four possible use cases and scientific challenges that can be addressed with the model and its adaptations.¹⁶⁹
- Identify and assess the potential risks of misuse of the foundation model.
- Propose a plan to make the model public, maintain and evolve it and promote it to the scientific community on a regular basis, in order to give visibility to the concept, discuss key findings and anticipate the technology evolution – possibly in synergy with other relevant projects.

Proposals should involve expertise in Social Sciences and Humanities (SSH), in the cases where legal and ethical experts should be involved to address data privacy, sharing agreements, and compliance with regulations.

Synergies with the selected projects from HORIZON-INFRA-2025-01-EOSC-06: Using Generative AI (GenAI4EU) for Scientific Research via EOSC are encouraged, where relevant. Proposals are encouraged to collaborate with established infrastructures such as the WeatherGenerator¹⁷⁰ project.

International cooperation is encouraged, where the EU has reciprocal benefit, like the Trillion Parameter Consortium.¹⁷¹

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

¹⁶⁸ In case the project plans to use the EuroHPC network, the EU-funded project EPICURE offers an application support service for EuroHPC: [Epicure - European Commission \(europa.eu\)](https://epicure.eu)

¹⁶⁹ For materials science, examples include, but are not limited to: **(for materials science)** alternatives to hazardous materials like PFAS, materials that lower environmental footprint, materials for quantum technology, for higher capacity batteries, for more efficient photovoltaic devices, etc.; **(for climate science)** enhanced prediction of climate and weather extremes, early warning systems, forecasting of climate-driven migration, and monitoring of the global carbon budget, monitoring and measuring adaptation effectiveness; **(for environmental pollution sciences)** solutions for the detection and assessment of pollution, including pollutants of emerging concern; **(for agricultural sciences)** enhanced prediction of impact of plant pests, monitoring of animal health and welfare, monitoring of soil health or of water management in agriculture.

¹⁷⁰ <https://weathergenerator.eu/>

¹⁷¹ Ref. [Trillion Parameter Consortium \(TPC\) - Generative AI for Science and Engineering](https://trillionparameterconsortium.eu/)

HORIZON-CL4-INDUSTRY-2025-01-DIGITAL-62: Facilitated cooperation for AI in Science (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁷².</p>

Expected Outcome: Projects are expected to contribute to the following outcomes:

- Identify the long-term research challenges where AI can make a meaningful breakthrough contributing to EU's competitive edge in selected scientific disciplines/areas, through a Strategic Research and Innovation Agenda.
- Provide evidence to structure the resources for AI in Science at European level, as a feasibility test towards potential R&I initiatives beyond the CSA that could optimise access to relevant data, infrastructure and talent across different scientific domains for more and better AI-enabled research.
- Coordinate, strengthen the network and raise awareness and a community of scientists, including citizen scientists, research organisations and stakeholders towards new paradigms of research with AI.

Scope: Artificial intelligence is a game-changer for science and innovation, and promises significant opportunities to boost the European competitive edge in R&I that need to be capitalised on. The aim of the CSA is to structure AI-enabled research in Europe and assess

¹⁷² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

options towards optimising the ecosystem for AI in Science in Europe, through a Strategic Research & Innovation Agenda and assessing the potential for possible future R&I initiative(s), in line with the recommendations of the Scientific Advice Mechanism¹⁷³, and the European Commission President's political guidelines, for the setting up of an AI Research Council¹⁷⁴..

The project should develop a Strategic Research and Innovation Agenda for AI in Science by mobilising large groups of domain and AI researchers in different fields **to identify key long-term research challenges in a diverse range of scientific areas where AI can make a meaningful difference for scientific breakthroughs**, which are compelling to the EU competitive, environmental and social policy agenda. The project should come up with pilot areas from across Horizon Europe Pillar II Clusters, building on Europe's competitive advantages in science and AI technologies. The research challenges should be related to prediction and design problems in the different scientific fields identified that could be solved with AI.

The SRIA should also include areas where AI can improve generic scientific tasks e.g virtual research assistant / tools for literature-based discovery, for improving / enabling research workflows, lab automation and collaborative human-AI work in science. Research priority areas involving the use of models based on frugal AI, which are more compact, more efficient and less energy intensive, as well as human-centric and trustworthy AI for scientific work should also be explored.

The project should build evidence and assess the needs and potential for R&I initiatives for AI in Science beyond the CSA, in an effort to identify ways to improve the EU landscape for support for AI in Science, to be discussed and **agreed upon with the Commission and the Member States**. The assessment should identify the ways for improving data access, infrastructure and support services, as well as skills and talent-related needs to boost the integration of AI in different fields of science at larger scale in Europe in research processes and lab automation, while promoting reproducibility, transparency and open science. It should also identify options for EU to better enable cooperative development and sharing of AI models for scientific discovery across different scientific fields. It should also take into account existing EU efforts to support access to data, research infrastructures, networks, HPC.

Different scenarios of R&I initiatives and infrastructure improvements should be prototyped together with a diverse range of users and stakeholders from the research community, industry, start-ups, civil society and policy-maker communities. Based on the feasibility test results, the project should **develop a roadmap** on the needed steps for a more effective coordination between the domain and AI scientific communities in Europe and the needed upgrades in service and infrastructure provision at EU level for the integration of AI in

¹⁷³ See European Commission's Group of Chief Scientific Advisors (2024). [Successful and timely uptake of artificial intelligence in science in the EU: scientific opinion](#). Brussels: European Commission.

¹⁷⁴ See [Ursula von der Leyen, Political Guidelines For The Next European Commission 2024–2029](#)

different scientific fields, including research processes engaging citizens and civil society, e.g. Citizen Science.

The proposals should also provide coordination and dissemination for interdisciplinary AI-enabled science to facilitate stakeholder engagement, coordination and promotion of AI in Science initiatives across Europe. The CSA should develop a website, organise awareness raising events for the benefits of AI in Science and create opportunities for exchanging on good practices.

Projects should build on or seek collaboration with existing projects and develop synergies with other relevant European, national or regional initiatives, funding programmes and platforms, in particular with EU-level initiatives such as EOSC¹⁷⁵, EuroHPC Joint Undertaking¹⁷⁶, ESFRI,¹⁷⁷ AI Factories,¹⁷⁸ the EU AI, Data and Robotics Partnership,¹⁷⁹ AI4EOSC¹⁸⁰ the AI on Demand Platform¹⁸¹ and the GenAI4EU Central Hub.

¹⁷⁵ [Home | European Open Science Cloud - EU Node](#) and the selected projects from the HORIZON-INFRA-2025-01-EOSC-04: Advancing AI-readiness and Machine-Actionability in the EOSC Ecosystem.

¹⁷⁶ [Homepage - EuroHPC JU](#)

¹⁷⁷ www.esfri.eu

¹⁷⁸ [AI Factories | Shaping Europe's digital future](#)

¹⁷⁹ [Adra Association](#)

¹⁸⁰ [AI4EOSC - AI4EOSC](#)

¹⁸¹ [AI-On-Demand Portal - AIoD - AI on Demand](#)

Destination 5: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data

Today, EU citizens enjoy watching satellite TV, increasingly accurate global navigation services for all transport modes and users, extended Earth monitoring for land, marine, atmosphere and climate change, global meteorological observation and accurate cartographies of a wide number of variables. Space also makes important contributions to security crisis management and emergency services. EU Space Programme components (such as EGNSS and Copernicus) are key assets for the EU policies on climate, environment, transport, agriculture and secure society. Finally, the Space sector is a source of economic growth and jobs.

This Destination is structured along the following building blocks:

- Accessing Space, i.e. the ability to transport satellites, cargo, and humans into space; build and launch the required vehicles, including re-usable systems; and operate the related facilities and services;
- Using Space on Earth, i.e. the ability to provide space-based secure communication, navigation and Earth observation services and applications, including through the EU Space flagships Galileo, Copernicus and IRIS²;
- Monitoring Space, i.e. the ability to detect, track and anticipate the trajectory of spacecraft, Near-Earth objects, and space debris during their full lifetime; to share data with relevant stakeholders; and to provide solutions for safe international space traffic management. It also includes the tracking and anticipation of other impacts on the space environment, such as Space weather events;
- Acting in Space, i.e. the ability to inspect, rendezvous and dock, grasp, repair, reconfigure, build, assemble and disassemble, reuse/recycle, relocate, remove and transport operational, non-operational, and other objects in space, including platforms or larger structures;
- Exploring Space, i.e. the ability to conduct high profile space exploration activities, perform excellent science and exploit space data to increase our knowledge about the Universe and celestial bodies, with a view to their exploration for scientific and socio-economic benefits;
- Boosting Space, i.e. the ability to sustain the above strategic capabilities through fostering the competitiveness of the EU space sector; improving education and developing the required skills; accelerating the pace of innovation; supporting EU non-dependency on critical technologies; and strengthening international cooperation.

Those building blocks are implemented through the following headings:

- **Heading 1: Accessing Space**

Autonomous access to space is a prerequisite for the strategic autonomy of the EU. It is a key enabler and indispensable element in the space ecosystem and value chain. European launch systems allow the autonomous deployment of satellites for the Union's flagships Copernicus, Galileo/EGNOS and IRIS² and contribute to the security and resilience of Europe's sovereign space infrastructure.

In a context of fierce competition and launch services paradigm changes, ensuring that Europe improves the resilience and the cost-effectiveness of its autonomous access to space is crucial. This requires urgent activities to enable and further consolidate operational capacities before 2030.

This challenge will be tackled by fostering space transportation solutions through the support to building blocks for smart technologies and digital solutions and contributing to facilitate access to European spaceports.

In a forward-looking approach and thanks to the implementation of a European Parliament Preparatory Action (outside the scope of Horizon Europe), a new R&I approach will be applied toward a more service-oriented and less prescriptive support of the full development cycle of access to space innovations. At the same time, a reflection will be carried out to envisage follow-up actions through the 26-27 WP and future programmes.

- **Heading 2: Acting in Space**

Act in space is a key enabler of the future freedom of action of the EU. In-Space Operations and Services (ISOS) will ensure EU's freedom of action in space and increase the resilience, sustainability, safety and protection of its space infrastructure, and contribute to the strengthening of the competitiveness of the EU space sector. R&I activities should bring the Europe to the forefront of emerging service applications, including inspection, rendezvous and docking, grasping, repair, reconfiguration, assembly and disassembly, manufacturing, resource extraction, reuse/recycling, removal and transport of objects in space, for satellites, platforms and larger structures. Key space R&I activities will be driven by a pilot mission that will contribute to establish and foster a new in-space economy.

Game-changing innovations and enabling technologies are at the heart of ISOS and an important focus of future actions. The paradigm shift towards adaptive space systems builds on automation and robotics, artificial intelligence, modular and reconfigurable spacecraft concepts. Together with other enabling technologies such as electric propulsion, they will provide new ways on how space assets are designed, produced, tested, transported, and operated. Different means realised with AppStore-like approaches will benefit the future space ecosystem and foster a circular economy.

- **Heading 3: Using Space on Earth related to telecommunications**

The Union Secure Connectivity programme aims to develop a secure and autonomous space-based connectivity system for the provision of guaranteed and resilient satellite communications on Earth. Among the objectives are to develop, build and operate a multiorbital space-based state-of-the-art connectivity system, continuously adapted to

governmental satellite communications demand evolution; to complement the Union pool of satellite communication capacities and services; and to integrate the GOVSATCOM ground segment infrastructure, as well as the European quantum communication infrastructure (EuroQCI).

- **Heading 4: Using Space on Earth related to Earth Observation**

Copernicus core services (Climate Change, Marine Environment Monitoring, Land Monitoring, Atmosphere Monitoring, Emergency Management and Security) should evolve and improve to better respond to new and emerging policy needs, and to leverage the latest science and technology developments. The Copernicus service evolution research topics will focus on further enhancing the services in the areas of coupled Earth system reanalysis and exploitation of past and emerging satellite and other data streams, soil-vegetation-atmosphere modelling for volatile organic compounds and pollen, wildfire risk forecasting and related carbon emissions, and ocean data assimilation and ensemble prediction. The digital transformation across services and value chains will be promoted via a dedicated broad topic on AI to stimulate innovation and know-how exchange. In connection with the Space Data Economy, downstream market uptake research activities will focus on energy, climate adaptation and environmental footprint reduction, green financing and insurance, and liveable cities of the future. Innovation in Earth observation services will also be supported in the field of ship source pollution detection in the context of evolving maritime policies.

- **Heading 5: Using Space on Earth related to satellite navigation**

For Galileo/EGNOS, the international context, the competitive environment with emerging actors and novel techniques in the value chain, the increasing threats, and the evolution of the technologies, components and systems, including dual-use technology, call for a constant adaptation of the EU space infrastructure to these changing realities.

To meet these challenges, EU needs sustained investments in R&D for innovative mission concepts, technology and systems. These will ensure the continuity of the EGNSS service, minimise the risks for technology inclusion in the infrastructure, thanks to anticipated development and testing including in-orbit, protect better this infrastructure against modern threats (notably cyber, jamming/spoofing, natural hazards), and increase the strategic autonomy in key technologies. Overall, they will maintain the EU's leadership position in the Global Navigation Satellite Systems.

- **Heading 6: Using Space on Earth related to services and data coming from satellites**

Over 10% of the European GDP is enabled by economical activities linked to the need of location through satellite navigation systems. Whilst the market uptake of EGNSS is already good in many areas, important priorities still remain, in particular 1) support the development of solutions that underpin EU priorities and policies, including the Green Deal, 2) support the public sector as a customer of Galileo, 3) foster the competitiveness of EU downstream

industry and SMEs/start-ups and 4) leverage synergies with other space programmes and non-space technologies.

Downstream R&I activities for EGNSS applications are needed to support the uptake of the new services/differentiators (i.e. Galileo High Accuracy Service and Open Service Navigation Message Authentication, made available in 2022 for testing and initial services, Galileo Emergency Warning Service to be made available in 2025 and Galileo Public Regulated Services to be made available soon). Opportunities to be market leader lie a.o. in autonomous driving, unmanned vehicles (aerial, terrestrial and maritime), location-based services, critical infrastructures, emergency management and humanitarian aid, insurance and finance, urban development and cultural heritage.

Regarding Copernicus applications, the digital dimension must be reinforced, encouraging the collaboration of ICT players with Earth observation and space stakeholders. The uptake of applications using Copernicus data could be improved, including by public authorities, who are important potential customers. Also, while many applications are developed for the land sector, other areas are less active. Solutions for a more sustainable use of resources and preserving biodiversity should be reinforced, as well as for countering natural hazards and climate extreme events as well as climate change mitigation and adaptation.

- **Heading 7: Monitoring Space**

Orbital space infrastructure, the data, and the services they deliver have become indispensable for European societies and economies and in the daily lives of Europeans. However, due to an increasingly congested orbital space, the likelihood of a satellite being severely damaged or destroyed in a collision has raised dramatically. Such risk calls for action to preserve European interests by protecting its private and public investments in space in a sustainable manner.

Based on the EU Space Programme, capabilities of the Space Situational Awareness (SSA) component and Space Surveillance and Tracking (SST) services are being developed and consolidated through a Partnership of 15 Member States. The EU SST Partnership Agreement has officially entered into force on 11 November 2022. With this Partnership, EU SST builds on the good results achieved by the initial consortium of 5 Member States (Decision 541/2014) and targets continuity of activities and service provision, improvement of specialisation on expertise, and consideration of the duality and security dimension of SST.

Partnership's Member States have joined forces and networked their national assets and competences with the objective to establish and improve the Union's SST capacities to ensure the delivery of SST services to European institutions, public authorities, and public and private spacecraft operators and owners. Services are structured around three axes: Collision Avoidance, Fragmentation Analysis and Re-entry Analysis. EU SST service provision is the key operational capability for the EU's future approach to Space Traffic Management (STM) which encompasses the means and the rules to access, conduct activities in, and return from outer space safely, sustainably, and securely.

EU SST relies on the European industry, including start-ups, to develop and improve national, public-owned capacities based on Partnership's requirements. As a result, more than 80% of the funds delegated by the EU to the EU SST Partnership are sub-contracted to EU industry through call for tenders. This has triggered the spawning of a European industrial sector on SST activities that should contribute to the EU STM approach. On 15 February 2022, a Joint Communication on STM (JOIN/2022/4 final) has been adopted, calling for the enhancement of EU operational capabilities to support SST and STM activities (action 2). Within the framework of this STM Joint Communication, a European Industry Start-ups Forum on Space Traffic Management (EISF) has been created. The Forum aims at directly involving EU companies and other relevant stakeholders in the conception of future research and innovation activities in the SST/STM domain.

Further resilience and autonomy of the Union's SST capabilities will come by leveraging complementary contributions from European private capabilities and commercial initiatives. At the same time, EU industry is expected to adapt and benefit from new SST market opportunities appearing in a rapidly changing environment in and beyond Europe. To that end, research and development activities are oriented towards the strengthening of the competitiveness of the Union space industry, including start-ups, by increasing its capacity in designing, building, and operating its own SST systems.

Importantly, SSA also covers the domains of Space Weather (SW) and Near-Earth Objects (NEO). For those domains, activities are ongoing and no additional ones are needed under the 2025 WP.

- **Heading 8: Boosting space through non-dependence of the EU for key critical space technologies**

Ensuring non-dependence for critical space technologies is key, especially in the current geo-political context. The European Commission has undertaken several activities and deployed new tools (e.g. the EU Observatory of Critical Technologies) for assessing space technologies and identify those that are critical from a dependency point of view. Within this domain, a number of technological developments will be initiated with focus on priorities stemming from on-going and planned EU Space missions, including IRIS². Emphasis will be on reducing non-EU dependencies on critical space technologies across their whole supply chain from advanced materials to components, equipment, and sub-systems; providing unrestricted access to advanced space technologies relevant for EU space missions and programme components; developing or regaining capacity to operate independently in space by developing resilient space technologies supply chains, relying on EU supply chains and/or trustable and reliable supply chains not affected by non-EU export restrictions; enhancing competitiveness by developing products and capabilities reaching equivalent or superior performance level than those from outside the EU and compete at worldwide level; and opening new opportunities for manufacturers by reducing dependency on export restricted technologies.

- **Heading 9: Boosting Space through international cooperation**

International cooperation remains an important enabler as global challenges can best be addressed by global solutions. Opportunities lie especially in innovative technologies, in the exploitation of space-based data and in downstream applications.

- **Heading 10: Boosting Space through training and education activities**

Preparing the skilled workforce of tomorrow is essential to bridge the gap between supply and demand for talents in the European Space sector and inspire the next generation of space professionals.

- **Heading 11: Boosting Space through IOD/IOV opportunities**

IOD/IOV opportunities continue to be needed for experiments needing aggregation as well as for read-to-fly satellites. This includes the Flight Ticket Initiative to support competitiveness and innovation of the European Space sector.

- **Heading 12: Boosting Space through support to entrepreneurship**

Business development, acceleration and upscaling of start-ups is also much needed, which has given rise to the set-up of the CASSINI Space Entrepreneurship Initiative. CASSINI provides support to business and innovation-friendly ecosystems, including the strengthening business skills in the space market segments and digital services based on space data. CASSINI also aims at making start-ups and scale-ups investment-ready and able to secure venture capital funding and at leveraging synergies with the InvestEU programme and the EU Space Programme.

Limiting participation in certain actions to Member States (and certain associated countries to Horizon Europe)

The Space research part of the Horizon Europe Programme is by default open to the world, promoting international cooperation to drive scientific excellence.

However, an important aspect of this Destination consists in ensuring security and strengthening strategic autonomy across key technologies and value chains, taking advantage of the possibilities that space offers for the security of the Union and its Member States. This objective requires special rules in specific cases to set the requisite eligibility and participation conditions to ensure the protection of the integrity, security and resilience of the Union and its Member States. Hence, on an exceptional basis and duly justified, this work programme may foresee a limited participation to entities from selected countries. Such exceptional circumstances would relate to prevalent considerations to safeguard the Union's strategic assets, interests, autonomy or security. Possibilities for such limitations are framed by Article 22(5) of the Horizon Europe Regulation.

The following call(s) in this work programme contribute to this destination:

HORIZON-CL4-2025-02-SPACE-HADEA

HORIZON-EUSPA-2026-SPACE-03

Heading 1 - Accessing Space

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-02-SPACE-11: CSA on access to European spaceports

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions, participation is limited to legal entities established in Member States, Norway, Iceland and the other Associated Countries. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the</p>

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁸² .
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Expected Outcome: Common regulatory practices and guidelines will facilitate access to European spaceports and increase their attractiveness for European launch systems. The action is expected to contribute to the following outcomes:

- Awareness of stakeholders on practices and regulations;
- A comprehensive overview of technical challenges to be addressed in terms of guidelines and best practices;
- An assessment of the paths for the European spaceports regulations, guidelines and best practices to support safe and sustainable launch operations;
- An identification of the benefits for the European space market development, for European sovereignty as well as for international cooperation.
- Standards and guidelines should contribute to ease to launching from various spaceports.

Scope: This coordination and support action will contribute to the expected outcomes by:

- Assessing best practices, standards and guidelines for launch operations from European spaceports, taking into account experiences from worldwide existing spaceports.
- Proposing a set of common regulatory practices and guidelines for European Spaceports and evaluating their impact on the launch operations.
- Involving European stakeholders participating in the development of safety equipment with the aim to strengthen the spaceports interoperability with their technological solutions.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL4-2025-02-SPACE-12: Digital solutions for autonomy for space transportation systems, design and simulation tools - Digital enablers and building blocks

Call: SPACE-HADEA

Specific conditions

¹⁸² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions, participation is limited to legal entities established in Member States, Norway, Iceland, Canada, New Zealand, Switzerland, and the United Kingdom. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security.¹⁸³</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may</p>

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The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

	additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-5 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁸⁴ .

Expected Outcome: The topic encompasses actions within the scope of the co-programmed European Partnership on Globally Competitive Space Systems ('Space Partnership') in the areas of satellite communication (SatCom), Earth Observation (EO) and New Commercial Space Transportation Solutions and is part of cohesive activities in the domain of digital developments under the grand heading of "digitalisation for commercial space solutions".

Under the area of *Access to Space* related to New Space Transportation Solutions, this topic focusses on the Low to Mid TRL level building blocks for key technologies required to strengthen competitiveness in this domain. Areas for launch service improvement are e.g., health monitoring systems, enabling real time subsystem monitoring through all mission phases, high speed sensor networks for on board real-time data feeds, smart avionics, functional building blocks for autonomy, enhanced ground-board high-data rate communication and high-speed on-board computer, as well as Artificial Intelligence algorithms to process high volumes of data.

Project results are expected to contribute to one or several of the following expected outcomes:

- Improved space transportation systems and launcher sustainability, reduced costs and operational constraints as well as enhanced system monitoring and autonomy;
- Technology developments for New Space Transportation Solutions, including addressing software and digital tools;
- Models for mission, system design and optimisation, able to integrate life cycle analysis, engineering and environmental models for optimisation of development through manufacturing and mission implementation.

¹⁸⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

This will contribute to developing, deploying global space-based services applications and data and contribute to fostering the EU's space sector competitiveness, as stated in the expected impact of this destination.

Scope: To tackle the above-mentioned expected outcomes, the following R&I is expected to be addressed:

- the maturation of eco-design software tools enhancing reconfigurability in orbit
- the maturation of disruptive/game changing technologies related to digitalisation

Proposals are expected to promote cooperation between different actors (industry, SMEs and research institutions) and consider opportunities to quickly turn technological innovation into commercial use in space.

Proposals under this topic should explore synergies and be complementary to already funded actions in the context of technology development at component level. In particular, it is expected that projects make use of existing European technologies and/or building blocks at component level contributing to European non-dependence and strengthen competitiveness, and this should be clearly presented in the proposal. Furthermore, proposed activities should be complementary to H2020 and Horizon Europe funded projects, national activities and activities funded by the European Space Agency (ESA).

This topic implements the co-programmed European Partnership on ‘Globally Competitive Space Systems’ (GCSS). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Globally Competitive Space Systems’ (GCSS) in support of the monitoring of its KPIs.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL4-2025-02-SPACE-13: Digital solutions for autonomy for space transportation systems, design and simulation tools – targeting demonstration

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 and 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.00 million.
<i>Type of Action</i>	Innovation Actions

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions, participation is limited to legal entities established in Member States, Norway, Iceland, Canada, New Zealand, Switzerland, and the United Kingdom. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security.¹⁸⁵</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	<p>Activities are expected to achieve TRL 7-8 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p>

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The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

	Eligible proposals submitted under this topic and exceeding all the evaluation thresholds will be awarded a STEP Seal [https://strategic-technologies.europa.eu/about/step-seal_en].
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁸⁶ .

Expected Outcome: The topic encompasses actions within the scope of the co-programmed European Partnership on Globally Competitive Space Systems ('Space Partnership') in the areas of satellite communication (SatCom), Earth Observation (EO) and New Commercial Space Transportation Solutions and is part of cohesive activities in the domain of digital developments under the grand heading of "digitalisation for commercial space solutions".

Under the area of *Access to Space* related to New Space Transportation Solutions, this topic focusses on the Mid to High TRL level developments of key technologies required to strengthen competitiveness in this domain.

Cost reduction, enhanced availability, and improved reliability must be reached by harnessing the advantages of reusability and modularity. Areas for launch service improvement are e.g., health monitoring systems, enabling real time subsystem monitoring through all mission phases, development of technologies and functional building blocks with a focus on digital solutions for autonomy, development of low cost/low mass sensors and efficient avionics. The demand for readily accessible off-the-shelf modular solutions and products, caters to the needs of all launcher manufacturers.

Project results are expected to contribute to one or several of the following expected outcomes:

- The ability to identify and locate structural damage remotely (like cracks, corrosion, delamination or structural weakening) within the transportation systems before it leads to significant failure.
- The ability to provide autonomous thermo-mechanical monitoring enabling tracking changes in temperature, mechanical behaviour and loads experienced by the transportation systems, to predict and autonomous prevent failures.

¹⁸⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

This will contribute to developing, deploying global space-based services applications and data and contribute to fostering the EU's space sector competitiveness, as stated in the expected impact of this destination.

Scope: To tackle the above-mentioned expected outcomes, the following R&I should be addressed: R&I on advanced technologies and digital sensors for new space transportation, such as smart avionics with modularity and reusability drivers, health monitoring system and smart sensors, and structural health monitoring addressing thermo-mechanical monitoring and damage detection, ground and flight software for data management even by use of AI-algorithms.

The developments should aim at on-ground or in-orbit demonstration focusing on software and digital tools.

Proposals are expected to promote cooperation between different actors (industry, SMEs and research institutions) and consider opportunities to quickly turn technological innovation into commercial use in space via e.g., on-ground or in orbit demonstration.

Proposals under this topic should explore synergies and be complementary to already funded actions in the context of technology development at component level. In particular, it is expected that projects make use of existing European technologies and/or building blocks at component level contributing to European non-dependence and strengthen competitiveness, and this should be clearly presented in the proposal. Furthermore, proposed activities should be complementary to H2020 and Horizon Europe funded projects, national activities and activities funded by the European Space Agency (ESA).

This topic implements the co-programmed European Partnership on 'Globally Competitive Space Systems' (GCSS). As such, projects resulting from this topic will be expected to report on results to the European Partnership 'Globally Competitive Space Systems' (GCSS) in support of the monitoring of its KPIs.

This topic contributes to the Strategic Technologies for Europe Platform (STEP) and addresses Space technologies falling under the sectors of "digital technologies" and "deep tech innovation". This topic addresses objectives stated in the STEP Regulation, e.g., the development of critical technologies and safeguarding and strengthening their EU value chain. This topic will help reduce strategic dependencies from outside of the EU for components and equipment for the EU Space Programme, as well as for other European space applications.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

Heading 2 - Acting in Space

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-02-SPACE-21: ISOS Pilot Mission Detailed Design – Servicing component

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>The page limit of the application is 60 pages.</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely avoiding a situation of technological dependency on a non-EU source, in a global context that requires the EU to build on its strengths and to carefully assess and address strategic weaknesses, vulnerabilities and high-risk dependencies, participation is limited to legal entities established in Member States and the following associated countries: Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security.¹⁸⁷</p>

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The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retracts or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of

	If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: Eligible proposals submitted under this topic and exceeding all the evaluation thresholds will be awarded a STEP Seal [https://strategic-technologies.europa.eu/about/step-seal_en].
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: The strategic objective of this topic is to develop capabilities to ‘Act in Space’ through demonstrating in space a pilot mission by 2030 related to ISOS. The envisaged ISOS pilot mission shall provide the necessary seed components for a future service infrastructure, available to the European in-space ecosystem (including the EU assets), driving the generation of a new in-space economy, providing enhanced in-orbit technology demonstration and maximising EU technology non-dependence.

This pilot mission will largely contribute to ensure EU’s freedom of action in space, increase the resilience and protection of EU assets in space and foster the development of the new in-space economy. A pioneering and a novel mission concept which is unique compared to other initiatives among all space-faring nations is envisaged. The mission will build on previous R&I with an operational mission concept, focusing on application and service demonstration, with a concrete view to commercial and governmental usage. The detailed mission concept will be derived in close coordination with EU Member States and EEA countries through a dedicated ISOS Pilot Mission Advisory Group (PMAG)¹⁸⁸.

the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

¹⁸⁸ The ISOS Pilot Mission Advisory Group (PMAG) is composed of representatives of the Commission and the public authorities of interested Member States and EEA countries, under the chair of the Commission, with the objective to frame the ISOS Pilot Mission. It is expected that the PMAG will be

This topic addresses the finalisation of the detailed design of the **servicing component of the ISOS pilot mission**, that should feature robotic capabilities. The servicing component will be based on previous and ongoing R&I developments and could provide services such as inspection, upgrade, repair, life extension including refuelling, delivery and exchange of payload, reconfiguration, relocation, capture and removal of assets in space.

Project results are expected to contribute to the following expected outcomes:

- A sustainable, highly automated and digitalised, flexible and economically viable space infrastructure, building on technologies and concepts for a circular economy in space, e.g. plug-and-play spacecraft functionality introducing recycling/re-use of spacecraft modules/functionalities;
- ISOS Pilot mission preparation up to detailed mission and system design for the servicing component and maturation of enabling technologies and innovative system and operational concepts;
- Elaboration of interfaces between the different components of the mission, together with the other mission components (i.e. HOST, logistics and satAPPs) and the ISOS Pilot Mission Coordination and Support Action (CSA)¹⁸⁹;
- Contribution to the ISOS Pilot Mission Objectives provided in the technical annex¹⁶³;
- Elaboration of clear use cases and relevant business models focussing on governmental and/or commercial needs;
- Ensuring the availability of results to the next mission phases.

This topic will contribute to, in the medium to long term, developing, deploying global space-based services and contribute to fostering the European space sector competitiveness, as stated in the expected impact of this destination.

Scope: To tackle the above expected outcomes, the following R&I actions should be addressed, taking into account the provided technical annex¹⁹⁰:

- R&I to complete detailed mission and system design¹⁹¹ (including relevant key technology maturation) for the servicing component as part of the ISOS pilot mission. More specifically, projects should finalise the detailed design for this component building on current or previous developments, demonstrating the achievement of the required TRL for all relevant technologies;

replaced by a dedicated expert group that will take over all functions of the PMAG; in this event all references to the PMAG will refer to that expert group.

¹⁸⁹ ISOS Pilot Mission Coordination and Support Action

¹⁹⁰ Guidance document for the ISOS Pilot Mission, derived in close collaboration with the ISOS Pilot Mission Advisory Group, and published on the EU funding and tenders portal

¹⁹¹ Comparable with a mission design phase C according to ECSS-M-ST-10C

- Contribution to the overall ISOS pilot mission detail design in close cooperation with the other mission components (including other servicing components), the ISOS Pilot Mission Coordination and Support Action and the ISOS Pilot Mission Advisory Group;
- R&I on related service capabilities and applications including operational concepts for servicing individual or fleets of satellites based on the functionality of the pilot mission system design. More specifically, possible use case for servicing a real EU asset is expected to be developed up to delivery of a concept of operations (CONOPS).

Projects are expected to ensure full compliance to the ISOS detailed pilot mission concept including interoperability with the other mission components, in case a possibility for a standalone IOD for the proposed servicing component materialises earlier than the ISOS pilot mission.

Proposals are expected to promote cooperation between different actors (industry, SMEs and research institutions) and consider opportunities to quickly turn technological innovation into commercial use in space via e.g., on-ground or in-orbit demonstration.

Proposals should clearly present a concrete plan to ensure that required technologies reach the necessary TRL at the end of the project. Moreover, complementarities with previous and/or ongoing R&I for the proposed servicing component should be clearly described. More specifically, proposals should explore relevant and promising solutions developed in Horizon Europe, Horizon 2020, or other EU-funded relevant activities, in particular, the topics: Future Space Ecosystem (HORIZON-CL4-2021-SPACE-01-12/ 2022-SPACE-01-11/ 2023-SPACE-01-12) and in relevant projects funded by the European Space Agency (ESA) and/or national programmes. Finally, proposals are also expected to consider the use of existing European technologies and/or building blocks, including at component level, contributing to European non-dependence and strengthen competitiveness.

Proposals are expected to consider and contribute to a balanced provision of Member States' and eligible Associated Countries' expertise and capabilities to the overall ISOS pilot mission, to support a successful introduction of the strategic capacity 'Act in Space' for the EU, its Member States and other partners.

This topic contributes to the Strategic Technologies for Europe Platform (STEP¹⁹²) and addresses Space technologies falling under the sectors of “digital technologies” and “deep tech innovation”¹⁹³. This topic addresses objectives stated in the STEP Regulation, e.g., the development of critical technologies and safeguarding and strengthening their EU value chain. This topic will contribute to advancing digital capabilities in space and enhance the sustainability and agility of the EU's space assets.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

¹⁹² OJ L, 2024/795, 29.2.2024, ELI: <http://data.europa.eu/eli/reg/2024/795/oj>
¹⁹³ C(2024) 3148 final

The project(s) selected from this topic are expected to collaborate among themselves and with those selected under topics HORIZON-CL4-2025-02-SPACE-22, 23, 24 and ISOS Pilot Mission Coordination and Support Action, in order to ensure interoperability and the necessary and sufficient documentation and information sharing for the implementation of the Pilot Mission, to make economies of scale in sharing best practices, defining common processes for addressing the different challenges, ensuring efficient monitoring and review, organising dissemination and communication activities, etc. Such collaboration among all those projects will be formalised by a collaboration agreement.

HORIZON-CL4-2025-02-SPACE-22: ISOS Pilot Mission Detailed Design – HOST component

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 12.00 and 17.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 17.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 60 pages.
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely avoiding a situation of technological dependency on a non-EU source, in a global context that requires the EU to build on its strengths and to carefully assess and address strategic weaknesses, vulnerabilities and high-risk dependencies, participation is limited to legal entities established in Member States and the following associated countries: Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible. For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in

	<p>the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security.¹⁹⁴</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: The strategic objective of this topic is to develop capabilities to 'Act in Space' through demonstrating in space a pilot mission by 2030 related to ISOS. The envisaged ISOS pilot mission shall provide the necessary seed components for a future service infrastructure, available to the European in-space ecosystem (including the EU assets), driving the generation of a new in-space economy, providing enhanced in-orbit technology demonstration and maximising EU technology non-dependence.

This pilot mission will largely contribute to ensure EU's freedom of action in space, increase the resilience and protection of EU assets in space and foster the development of the new in-space economy. A pioneering and a novel mission concept, which is unique compared to other initiatives among all space-faring nations is envisaged. The mission will build on previous R&I with an operational mission concept, focusing on application and service demonstration, with a concrete view to commercial and governmental usage. The detailed

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The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

mission concept will be derived in close coordination with EU Member States and EEA countries through a dedicated ISOS Pilot Mission Advisory Group (PMAG)¹⁶¹.

This topic addresses the detailed design of the **platform component of the ISOS pilot mission**, which will be named **Hub for Operational Services and on-orbit Testing (HOST)**. The HOST shall be able to host multiple servicer spacecraft, IOD/V experiments and composable, and exchangeable functional satellite modules (satAPPs) for delivery, and shall be equipped with robotic manipulation and refuelling capabilities.

Project results are expected to contribute to the following expected outcomes:

- A sustainable, highly automated, flexible and economically viable space infrastructure, building on technologies and concepts for a circular economy in space, e.g. plug-and-play spacecraft functionality introducing recycling/re-use of spacecraft modules/functionalities;
- ISOS Pilot mission preparation up to detailed mission and system detail design for the HOST component, and maturation of enabling technologies and innovative system and operational concepts;
- Elaboration of interfaces between the different components of the mission, together with the other mission components (i.e. servicing, logistics and satAPPs) and the ISOS Pilot Mission Coordination and Support Action (CSA)¹⁶²;
- Contribution to the ISOS Pilot Mission Objectives provided in the technical annex¹⁶³;
- Elaboration of clear use cases and relevant business models focussing on governmental and/or commercial needs;
- Provision of enhanced opportunities for IOD/V by actively promoting experiment plug and play on the HOST;
- Ensuring the availability of results to the next mission phases.

This topic will contribute to, in the medium to long term, developing, deploying global space-based services and contribute to fostering the European space sector competitiveness, as stated in the expected impact of this destination.

Scope: To tackle the above expected outcomes, the following R&I actions should be addressed taking into account the provided technical annex¹⁶³:

- R&I to complete ISOS Pilot mission detailed mission and system design¹⁶⁴ (including relevant key technology maturation) for the platform component (HOST), demonstrating the achievement of the required TRL for all relevant technologies;

- R&I on key enabling technologies relevant for design of a scalable, modular, flexible platform component, equipped with robotic manipulation, satAPPs compatibility¹⁹⁵ and refuelling capability (for the HOST and the hosted servicer and logistic spacecraft), that can be extended and reconfigured to meet different demands (e.g., governmental and commercial, IOD/V and additional servicer hosting slots, robotic/manufacturing testbeds, warehouse and logistic node, etc.);
- Contribution to the overall ISOS pilot mission detail design in close cooperation with other mission components, the ISOS Pilot Mission Coordination and Support Action and the ISOS Pilot Mission Advisory Group;
- R&I on related HOST functions and applications including related operational concepts considering the use of distributed computing, multi-agent and network architectures and supported by simulations, enhancing the overall pilot mission system functionality.

Proposals are expected to promote cooperation between different actors (industry, SMEs and research institutions) and consider opportunities to quickly turn technological innovation into commercial use in space via e.g., on-ground or in-orbit demonstration.

Proposals should clearly present a concrete plan to ensure that required technologies reach the necessary TRL at the end of the project. Moreover, complementarities with previous and/or ongoing R&I for the proposed servicing component must be clearly described. More specifically, proposals should explore relevant and promising solutions developed in Horizon Europe, Horizon 2020, or other EU-funded relevant activities, in particular, the topics: Future Space Ecosystem (HORIZON-CL4-2021-SPACE-01-12/ 2022-SPACE-01-11/ 2023-SPACE-01-12) and in relevant projects funded by the European Space Agency (ESA) and/or national programmes. Finally, proposals are also expected to consider the use of existing European technologies and/or building blocks, including at component level, contributing to European non-dependence and strengthen competitiveness.

Proposals are expected to consider and contribute to a balanced provision of Member States' and eligible Associated Countries' expertise and capabilities to the overall ISOS pilot mission, to support a successful introduction of the strategic capacity 'Act in Space' for the EU and its Member States.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

The project selected from this topic is expected to collaborate with those selected under topics HORIZON-CL4-2025-02-SPACE-21, 23, 24 and ISOS Pilot Mission Coordination and Support Action, in order to ensure interoperability and the necessary and sufficient documentation and information sharing for the implementation of the Pilot Mission, to make economies of scale in sharing best practices, defining common processes for addressing the

¹⁹⁵ Ability to receive functional upgrades through composable and exchangeable functional satellite modules (satAPPs) that will be connected via dedicated Universal Service Interfaces (USI)

different challenges, ensuring efficient monitoring and review, organising dissemination and communication activities, etc. Such collaboration among all those projects will be formalised by a collaboration agreement.

HORIZON-CL4-2025-02-SPACE-23: ISOS Pilot Mission Detailed Design – Logistics component

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 10.00 and 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>The page limit of the application is 60 pages.</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions, participation is limited to legal entities established in Member States, Norway, Iceland, Canada, New Zealand, Switzerland, and the United Kingdom. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets,</p>

	<p>interests, autonomy, or security.¹⁹⁶</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>Eligible proposals submitted under this topic and exceeding all the evaluation thresholds will be awarded a STEP Seal [https://strategic-technologies.europa.eu/about/step-seal_en].</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: The strategic objective of this topic is to develop capabilities to ‘Act in Space’ through demonstrating in space a pilot mission by 2030 related to ISOS. The envisaged ISOS pilot mission shall provide the necessary seed components for a future service infrastructure, available to the European in-space ecosystem (including the EU assets), driving the generation of a new in-space economy, providing enhanced in-orbit technology demonstration and maximising EU technology non-dependence.

This pilot mission will largely contribute to ensure EU’s freedom of action in space, increase the resilience and protection of EU assets in space and foster the development of the new in-space economy. A pioneering and a novel mission concept, which is unique compared to other initiatives among all space-faring nations is envisaged. The mission will build on previous R&I with an operational mission concept, focusing on application and service demonstration, with a concrete view to commercial and governmental usage. The detailed

¹⁹⁶ The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

mission concept will be derived in close coordination with EU Member States and EEA countries through a dedicated ISOS Pilot Mission Advisory Group (PMAG)¹⁶¹.

This topic addresses the detailed design of the **logistics component of the ISOS pilot mission**. This component shall be able to transport cargo (i.e., satAPPs and propellant) taken from an upper stage to the HOST component.

Project results are expected to contribute to the following expected outcomes:

- A sustainable, highly automated, flexible and economically viable space infrastructure, building on technologies and concepts for a circular economy in space, e.g. plug-and-play spacecraft functionality introducing recycling/re-use of spacecraft modules/functionalities;
- ISOS Pilot mission preparation up to detailed mission and system design for the logistics component and maturation of enabling technologies and innovative system and operational concepts;
- Elaboration of interfaces between the different components of the mission, together with the other mission components (i.e. servicing, HOST and satAPPs) and the ISOS Pilot Mission Coordination and Support Action (CSA)¹⁶²;
- Contribution to the ISOS Pilot Mission Objectives provided in the technical annex¹⁶³;
- Elaboration of clear use cases and relevant business models focussing on governmental and/or commercial needs;
- Ensuring the availability of results to the next mission phases.

This topic will contribute to, in the medium to long term, developing, deploying global space-based services and contribute to fostering the European space sector competitiveness, as stated in the expected impact of this destination.

Scope: To tackle the above expected outcomes, the following R&I actions should be addressed, taking into account the provided technical annex¹⁶³:

- R&I to complete ISOS Pilot mission detailed mission and system design¹⁶⁴ (including relevant key technology maturation) for the logistics component, demonstrating the achievement of the required TRL for all relevant technologies;
- R&I on key enabling technologies relevant for design of a logistics component that can transport cargo (i.e., satAPPs and propellant) taken from an upper stage to the HOST component;
- R&I on solutions for docking and propellant management and transfer with the HOST. Building on existing European designs is encouraged;

- Contribution to the overall ISOS pilot mission detail design in close cooperation with other mission components, the ISOS Pilot Mission Coordination and Support Action and the ISOS Pilot Mission Advisory Group.

Proposals are expected to promote cooperation between different actors (industry, SMEs and research institutions) and consider opportunities to quickly turn technological innovation into commercial use in space.

Proposals should clearly present a concrete plan to ensure that required technologies reach the necessary TRL at the end of the project. Moreover, complementarities with previous and/or ongoing R&I for the proposed servicing component must be clearly described. More specifically, proposals should explore relevant and promising solutions developed in Horizon Europe, Horizon 2020, or other EU-funded relevant activities, in particular, the topics: Future Space Ecosystem (HORIZON-CL4-2021-SPACE-01-12/ 2022-SPACE-01-11/ 2023-SPACE-01-12) and in relevant projects funded by the European Space Agency (ESA) and/or national programmes. Finally, proposals are also expected to consider the use of existing European technologies and/or building blocks, including at component level, contributing to European non-dependence and strengthen competitiveness.

Proposals are expected to consider and contribute to a balanced provision of Member States' and eligible Associated Countries' expertise and capabilities to the overall ISOS pilot mission, to support a successful introduction of the strategic capacity 'Act in Space' for the EU and its Member States.

This topic contributes to the Strategic Technologies for Europe Platform (STEP¹⁹⁷) and addresses Space technologies falling under the sectors of "digital technologies" and "deep tech innovation"¹⁹⁸. This topic addresses objectives stated in the STEP Regulation, e.g., the development of critical technologies and safeguarding and strengthening their EU value chain. This topic will contribute to advancing digital capabilities in space and enhance the sustainability and agility of the EU's space assets.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

The project selected from this topic is expected to collaborate with those selected under topics HORIZON-CL4-2025-02-SPACE-21, 22, 24 and ISOS Pilot Mission Coordination and Support Action, in order to ensure interoperability and the necessary and sufficient documentation and information sharing for the implementation of the Pilot Mission, to make economies of scale in sharing best practices, defining common processes for addressing the different challenges, ensuring efficient monitoring and review, organising dissemination and communication activities, etc. Such collaboration among all those projects will be formalised by a collaboration agreement.

¹⁹⁷ OJ L, 2024/795, 29.2.2024, ELI: <http://data.europa.eu/eli/reg/2024/795/oj>

¹⁹⁸ C(2024) 3148 final

HORIZON-CL4-2025-02-SPACE-24: ISOS Pilot Mission Detailed Design – satAPPs component

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 2.00 and 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 60 pages.
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: Eligible proposals submitted under this topic and exceeding all the evaluation thresholds will be awarded a STEP Seal [https://strategic-technologies.europa.eu/about/step-seal_en].
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and

	Training Programme of the European Atomic Energy Community (2021-2025). ¹⁹⁹ .
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Expected Outcome: The strategic objective of this topic is to develop capabilities to ‘Act in Space’ through demonstrating in space a pilot mission by 2030 related to ISOS. The envisaged ISOS pilot mission shall provide the necessary seed components for a future service infrastructure, available to the European in-space ecosystem (including the EU assets), driving the generation of a new in-space economy, providing enhanced in-orbit technology demonstration and maximising EU technology non-dependence.

This pilot mission will largely contribute to ensure EU’s freedom of action in space, increase the resilience and protection of EU assets in space and foster the development of the new in-space economy. A pioneering and a novel mission concept, which is unique compared to other initiatives among all space-faring nations is envisaged. The mission will build on previous R&I with an operational mission concept, focusing on application and service demonstration, with a concrete view to commercial and governmental usage. The detailed mission concept will be derived in close coordination with EU Member States and EEA countries through a dedicated ISOS Pilot Mission Advisory Group (PMAG)¹⁶¹.

This topic addresses the detailed design of the **satAPPs component of the ISOS pilot mission**, that allows the creation of composable and exchangeable functional modules for satellite upgrade and the development of a European catalogue of satAPPs, following the AppStore approach and fostering system modularisation and flexibility.

Project results are expected to contribute to the following expected outcomes:

- A sustainable, highly automated, flexible and economically viable space infrastructure, building on technologies and concepts for a circular economy in space, e.g. plug-and-play spacecraft functionality introducing recycling/re-use of spacecraft modules/functionalities;
- ISOS Pilot mission preparation up to detailed mission and system design for the satAPPs component, and maturation of enabling technologies and innovative system and operational concepts;
- Elaboration of interfaces between the different components of the mission, together with the other mission components (i.e. servicing, HOST and logistics) and the ISOS Pilot Mission Coordination and Support Action (CSA)¹⁶²;
- Enhancing opportunities for IOD/V through satAPPs by actively promoting experiment plug and play on the HOST and prepared assets;
- Contribution to the ISOS Pilot Mission Objectives provided in the technical annex¹⁶³;

¹⁹⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Elaboration of clear use cases and relevant business models focussing on governmental and/or commercial needs;
- Contributing to a European catalogue of satAPPs, following the AppStore approach and fostering system modularisation and flexibility;
- Ensuring the availability of results to the next mission phases.

This topic will contribute to, in the medium to long term, developing, deploying global space-based services and contribute to fostering the European space sector competitiveness, as stated in the expected impact of this destination.

Scope: To tackle the above expected outcomes, the following R&I actions should be addressed, taking into account the provided technical annex¹⁶³:

- R&I to complete ISOS Pilot mission detailed mission and system design¹⁶⁴ (including relevant key technology maturation) for the satAPPs component. All relevant technologies shall reach the necessary TRL.
- R&I on technologies relevant for innovative satAPPs at TRL 6 that will be used in the context of the ISOS pilot mission to demonstrate upgrade of components' functionalities and/or payload exchange and IOD/V experiments.
- R&I on satAPP modules specifically for hosting IOD/V experiments.
- Contribution to the overall ISOS pilot mission detail design in close cooperation with other mission components, the ISOS Pilot Mission Coordination and Support Action and the ISOS Pilot Mission Advisory Group.

Proposals are expected to promote cooperation between different actors (industry, SMEs and research institutions) and consider opportunities to quickly turn technological innovation into commercial use in space via e.g., on-ground or in-orbit demonstration.

Proposals should clearly present a concrete plan to ensure that required technologies reach the necessary TRL at the end of the project. Moreover, complementarities with previous and/or ongoing R&I for the proposed servicing component must be clearly described. More specifically, proposals should explore relevant and promising solutions developed in Horizon Europe, Horizon 2020, or other EU-funded relevant activities, in particular, the topics: Future Space Ecosystem (HORIZON-CL4-2021-SPACE-01-12/ 2022-SPACE-01-11/ 2023-SPACE-01-12), EIC Accelerator WP2025 “Innovative in-space servicing, operations, robotics and technologies for resilient EU space infrastructure” and in relevant projects funded by the European Space Agency (ESA) and/or national programmes. Finally, proposals are also expected to consider the use of existing European technologies and/or building blocks, including at component level, contributing to European non-dependence and strengthen competitiveness.

International cooperation is encouraged in this topic.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

This topic contributes to the Strategic Technologies for Europe Platform (STEP) and addresses Space technologies falling under the sectors of “digital technologies” and “deep tech innovation”. This topic addresses objectives stated in the STEP Regulation, e.g., the development of critical technologies and safeguarding and strengthening their EU value chain. This topic will help reduce strategic dependencies from outside of the EU for components and equipment for the EU Space Programme, as well as for other European space applications.

The project(s) selected from this topic are expected to collaborate among themselves and with those selected under topics HORIZON-CL4-2025-02-SPACE-21, 22, 23 and ISOS Pilot Mission Coordination and Support Action, in order to ensure interoperability and the necessary and sufficient documentation and information sharing for the implementation of the Pilot Mission, to make economies of scale in sharing best practices, defining common processes for addressing the different challenges, ensuring efficient monitoring and review, organising dissemination and communication activities, etc. Such collaboration among all those projects will be formalised by a collaboration agreement.

Heading 3 - Using Space on Earth - Telecommunications

For a description of topics/actions related to the development of IRIS², please refer to "Indirectly managed actions by ESA" in the section "Other Actions" of this work programme.

Heading 3bis - Using Space on Earth – Telecommunications and Earth Observation

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-02-SPACE-31: Digital enablers and building blocks for Earth Observation and Satellite telecommunication for Space solutions

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility</i>	The conditions are described in General Annex B. The following

<i>conditions</i>	<p>exceptions apply:</p> <p>The following additional eligibility criteria apply: Subject to restrictions for the protection of European communication networks.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	<p>Activities are expected to achieve TRL 4-5 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector. Activities may start at any TRL.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁰⁰.</p>

Expected Outcome: The topic encompasses actions within the scope of the co-programmed European Partnership on Globally Competitive Space Systems ('Space Partnership') in the areas of satellite communication (SatCom), Earth Observation (EO) and New Commercial Space Transportation Solutions and is part of cohesive activities in the domain of digital developments under the grand heading of "digitalisation for commercial space solutions".

Under the area of *Using Space on Earth* related to SatCom and EO, below this topic focus on the fast increment of the Low to Mid TRL level building blocks for key technologies required to strengthen competitiveness in these domains. Digitalisation is a major enabler for enhancing the value of an End-to-End EO and SatCom system. For example, processing applied to multi-sensor data can significantly enhance the resolution of the final data set, and digital optimisation of the data flow directly improves the End-to-End timeliness of an EO system (from request to delivery). Lastly, the enhancement of End-to-End data resilience and integrity calls for digital technologies on-board and, on the ground.

Project results are expected to contribute to one or several of the following expected outcomes:

- Enable the European Space Industry to maintain a significant share of the global connectivity market by increasing the performance of space satellite networks, new type

²⁰⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

of control, space and ground segments being fully integrated into the terrestrial networks;

- New commercial services and applications enabled by increased digitalisation of space solutions;
- Advanced Earth observation payloads, technologies and processing means (on ground and/or in space), for all types of observation missions.

This will contribute to developing, deploying global, more flexible and reactive space-based services applications, to contribute to fostering the EU's space sector competitiveness, as stated in the expected impact of this destination.

Scope: The areas of R&I, which needs to be addressed to tackle the above-mentioned expected outcomes are:

- R&I on End-to-End SatCom Mission capabilities (e.g., satellite network interconnectivity, seamless integration into the terrestrial networks, taking into account and contributing to ongoing standardisation efforts, increased reactivity), strengthening efficient connectivity using various technologies (e.g. optical communication, Inter Satellite Links, reconfigurable payloads) and ensure compatibility and interoperability with 5G & 6G, and satellites as network nodes in a distributed system (e.g., ubiquitous use of orbital resources, distributed computing, embracing both ground and space), flexible and modular testbed prototype with representative building blocks for complex SatCom typologies, improve SatCom performances using innovative technologies (data fusion, user terminal development, new generation antennas, SDR payloads, exploitation of higher bands, etc).
- R&I on breakthrough harmonization enabling interoperability among multiple EO missions, breakthrough digitalized technology steps, such as AI algorithms, high performance cloud-based architectures, active and adaptive optics and/or higher power electronics (focal plane and RF back-ends and front-ends), mature (on-board and/or ground) digital techniques and technologies to support novel operational approaches, mature miniaturised instruments design - including their digitalized on-board processing electronics- fit for affordable EO constellations to address emerging markets;
- R&I on lower maturity building blocks and processes common to EO and SatCom systems, such as technologies and products improving system security and threats identification, resources usage optimization, tools to support the measure of key environmentally driven criteria through increased resource sharing, and maturation of high-performance processing payload H/W to support space network capabilities together with software functions to support reconfigurability, inter alia.

Proposals should address at least one of the areas outlined above.

Proposals are expected to promote cooperation between different actors (industry, SMEs and research institutions) and consider opportunities to quickly turn technological innovation into commercial use in space.

Proposals under this topic should explore synergies and be complementary to already funded actions in the context of technology development at component level, while still enabling new entrants and new approaches. In particular the topics: Critical Space Technologies for European non-dependence (HE H2020 SPACE-10-TEC-2018-2020, COMPET-1-2014-2015-2016-2017, HORIZON-CL4-2021-SPACE-01-81/ 2023-SPACE-01-72/ 2024-SPACE-01-73), satellite communication technologies (H2020 COMPET-2-2016, COMPET-3-2017, SPACE-15-TEC-2018, SPACE-29-TEC-2020, HORIZON-CL4-2021-SPACE-01-11), Earth Observation end-to-end technologies (HORIZON-CL4-2022-SPACE-01-13, HORIZON-CL4-2023-SPACE-01-11). It is expected that projects make use of existing European technologies and/or building blocks, including at component level, contributing to European non-dependence and strengthen competitiveness, and this should be clearly presented in the proposal. Furthermore, proposed activities should be complementary to H2020 and Horizon Europe funded projects, national activities and activities funded by the European Space Agency (ESA).

This topic implements the co-programmed European Partnership on ‘Globally Competitive Space Systems’ (GCSS). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Globally Competitive Space Systems’ (GCSS) in support of the monitoring of its KPIs.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL4-2025-02-SPACE-32: Preparing demonstration missions for collaborative Earth Observation and Satellite telecommunication for Space solutions

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 2.00 and 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 11.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: Subject to restrictions

	<p>for the protection of European communication networks.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>Eligible proposals submitted under this topic and exceeding all the evaluation thresholds will be awarded a STEP Seal [https://strategic-technologies.europa.eu/about/step-seal_en].</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁰¹.</p>

Expected Outcome: The topic encompasses actions within the scope of the co-programmed European Partnership on Globally Competitive Space Systems ('Space Partnership') in the areas of satellite communication (SatCom), Earth Observation (EO) and New Commercial Space Transportation Solutions and is part of cohesive activities in the domain of digital developments under the grand heading of "digitalisation for commercial space solutions".

Under the area of *Using Space on Earth* related to SatCom and EO, below this topic focusses on the Mid to High TRL level developments of key technologies required to strengthen competitiveness in these domains. Digitalisation is a major enabler for enhancing the value of an End-to-End EO and SatCom system. For example, processing applied to multi-sensor data can significantly enhance the resolution of the final data set, and digital optimisation of the data flow directly improves the End-to-End timeliness of an EO system (from request to delivery). Lastly, the enhancement of End-to-End data resilience and integrity calls for digital technologies on-board and, on the ground.

²⁰¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Project results are expected to contribute to one or several of the following expected outcomes:

- Enable the European Space Industry to maintain a significant share of the global connectivity market by increasing the performance of space satellite networks, new type of control, space and ground segments being fully integrated into the terrestrial networks;
- New commercial services and applications enabled by an increased digitalisation of space solutions;

Advanced Earth observation payloads, technologies and processing means, for multiple spectrum and frequency bands capabilities (on ground and in space), as well as optimisation of data downlink for all types of observation missions. This will contribute to developing, deploying global, more flexible and reactive space-based services applications, to contribute to fostering the EU's space sector competitiveness, as stated in the expected impact of this destination.

Scope: The areas of R&I, which needs to be addressed to tackle the above-mentioned expected outcomes are:

- R&I on End-to-End SatCom Mission capabilities (e.g., satellite network interconnectivity, seamless integration into the terrestrial networks, taking into account and contributing to ongoing standardisation efforts, increased reactivity), strengthening efficient connectivity using various technologies (e.g. optical communication, Inter Satellite Links, reconfigurable payloads) and ensure compatibility and interoperability with 5G & 6G networks, and satellites as network nodes in a distributed system (e.g., ubiquitous use of orbital resources, distributed computing, embracing both ground and space), flexible and modular testbed for complex satcom typologies to assess performances, compatibility of the different elements and operations concepts, data fusion;
- R&I on on-board processing to optimize EO missions' performance or timeliness (e.g., standardized software framework to host embedded edge-computing applications -AI, Machine Learning, in combination with onboard image processing for multiple spectrum and frequency bands capabilities-, data/signal image processing, enhanced downlink and uplink capabilities), EO ground segment interfaces and data flow standardisation and adoption (e.g., development of use cases demonstrating the associated digital building-blocks, at least in ground relevant environment), smart multi-source EO intelligence information fusion (e.g., innovative intelligence information extraction and fusion), EO-related equipment and instruments digitalisation (e.g., miniaturization of equipment, enhancement of the European optical digital detectors supply);
- R&I on synergetic technologies, building blocks and processes with applicability across both EO and SatCom systems and missions, such as maturation of technologies and products improving system security and threats identification, resources usage

optimization, tools to support the measure of key environmentally driven criteria through increased resource sharing, and maturation of high-performance processing payload H/W and payload data flexible downlink to support space network capabilities together with software functions to demonstrate mission flexibility.

Developments should aim at on-ground relevant environment or in-orbit demonstration focusing on software and digital tools (e.g. algorithms, functions), supporting open-HW alternatives (e.g. processors, electronics) such as RISC-V or similar from design to pre-operation phases.

Proposals may contribute to one or more of the above R&I areas, however the main area addressed should be clearly and unambiguously identified. To ensure a balanced portfolio covering the three areas described above, grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each area, provided that the applications attain all thresholds. For the purposes of the ranking the main area declared by the proposal will be considered.

Proposals are expected to promote cooperation between different actors (industry, SMEs and research institutions) and consider opportunities to quickly turn technological innovation into commercial use in space via e.g., on-ground relevant environment or in orbit demonstration.

Proposals under this topic should explore synergies and be complementary to already funded actions in the context of technology development at component level, while still enabling new entrants and new approaches. In particular the topics: Critical Space Technologies for European non-dependence (HE H2020 SPACE-10-TEC-2018-2020, COMPET-1-2014-2015-2016-2017, HORIZON-CL4-2021-SPACE-01-81/ 2023-SPACE-01-72/ 2024-SPACE-01-73), satellite communication technologies and high speed data chain (H2020 COMPET-2-2016, COMPET-3-2017, SPACE-15-TEC-2018, SPACE-29-TEC-2020, HORIZON-CL4-2021-SPACE-01-11), Earth Observation end-to-end technologies (HORIZON-CL4-2022-SPACE-01-13, HORIZON-CL4-2023-SPACE-01-11). It is expected that projects make use of existing European technologies and/or building blocks, including at component level, contributing to European non-dependence and strengthen competitiveness, and this should be clearly presented in the proposal. Furthermore, proposed activities should be complementary to H2020 and Horizon Europe funded projects, national activities and activities funded by the European Space Agency (ESA).

This topic implements the co-programmed European Partnership on ‘Globally Competitive Space Systems’ (GCSS). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Globally Competitive Space Systems’ (GCSS) in support of the monitoring of its KPIs.

This topic contributes to the Strategic Technologies for Europe Platform (STEP) and addresses Space technologies falling under the sectors of “digital technologies” and “deep tech innovation”. This topic addresses objectives stated in the STEP Regulation, e.g., the development of critical technologies and safeguarding and strengthening their EU value chain. This topic will help reduce strategic dependencies from outside of the EU for

components and equipment for the EU Space Programme, as well as for other European space applications.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

Heading 4 - Using Space on Earth – Earth Observation

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-02-SPACE-41: Copernicus Climate Change Service (C3S) evolution: new and innovative processing and methods for future Sentinels and other satellites for reanalyses

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-6 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector. Activities may start at any TRL.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of</i>	The rules are described in General Annex G. The following exceptions apply:

<i>the Grant Agreements</i>	Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁰² .
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Innovative methods to prepare and pre-process observational input for Earth-system reanalysis datasets, including the Copernicus Sentinel missions, which will lead to an increase in the use of observations for Earth-system reanalysis;
- Enhanced sparse data assimilation and initialisation methods of climate sub-component (e.g., atmosphere, ocean, land, hydrology) in Copernicus products;
- Comprehensive and better information about the climate records to be extracted from the available observations improving our overall monitoring of the climate and climate change;
- Expanded range of reanalyses products towards centennial reanalyses, and enhanced climate counterfactuals data sets to support data-driven predictions and the ongoing operationalisation of extreme event attribution.

Scope: The areas of R&I to address the above expected outcomes include:

- Improve the ability of Copernicus' and other models to assimilate new and other satellite observations (e.g. the Copernicus Sentinel Expansion and Next Generation missions, contributing missions, meteorological satellites, research satellites) that are sensitive to surface parameters and fluxes. It is also necessary to undertake research on information content of early satellite data and unlock their exploitation in reanalyses at global and regional scales;
- Exploit innovative methods (including AI/ML) for data rescue for in situ and remote sensing observations, in particular regarding past and changing observing methods and environmental factors, and on error analysis, quality control and bias adjustment of the historical observation record. The aim is to make best possible use of early observations from various records of in situ and remote sensing observations to improve physically consistent analyses of the atmosphere, the ocean, the land and the cryosphere towards centennial timescales;

²⁰² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Improve the use of Sentinel and other data in all Copernicus reanalyses and their use across different services. Beyond processing and reprocessing activities, specific coordinated developments in terms of observation operators and observational error characterization will be required;
- Explore innovative methods (e.g. AI/ML) to accelerate the production and updates of reanalyses, to capture reanalyses uncertainties efficiently, and to reduce overall computing energy/carbon footprint.

The C3S reanalyses represent a significant portion of the service data requests and are at the heart of the service product line and further exploitation (e.g. initialising climate predictions, evaluation of climate historical projections, climate intelligence, development of climate applications, AI/ML weather forecasts). The preparation of the future C3S coupled Earth system reanalyses is underway to significantly improve the consistency across earth system components and lengthen the timespan. An extension of the reanalyses back to the early 1900' would meet many requirements of users but such a task would be impossible without an adequate investment in data rescue and in the reprocessing of EO data. Reanalyses play a key and vital role in climate monitoring and in the attribution of extreme events, but the development of the required counterfactual dataset is often ad-hoc and lacks operational implementation.

Bringing together European expertise on a wide variety of observations, climate data records and global and regional reanalyses will be paramount, and this will require a very tight collaboration with space agencies, the National Meteorological and Hydrological Services, and the World Meteorological Organisation (WMO). International cooperation is hence strongly encouraged in this topic. This will fully realise the progressive exploitation of Copernicus Sentinel and other data for the monitoring of a changing climate over Europe and worldwide. In addition, the proposal should include some demonstrations of downstream applications that would benefit from these improvements. Synergies with Destination Earth are also encouraged.

Additionally, the transfer of research results to operations should receive active attention during the project to strengthen the readiness for an operational deployment in the future. Appropriate involvement and/or interaction with the relevant Entrusted Entities of the Copernicus services, the conditions for making available, for re-using and exploiting the results (including IPR) by the said entities should be addressed during the project implementation. Software should be open licensed.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL4-2025-02-SPACE-42: Copernicus Atmosphere Monitoring Service (CAMS) evolution: improved soil-vegetation-atmosphere modelling and data assimilation of atmospheric constituents

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-6 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector. Activities may start at any TRL.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁰³.</p>

²⁰³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Accurate simulation of the biogenic fluxes of Volatile Organic Compounds (VOCs) and other atmospheric constituents to represent the corresponding processes in numerical models;
- Enhanced monitoring of environmental policies regarding eutrophication and acidification of soils and ecosystems as well as for regulatory reporting commitments;
- Improved management of soils and vegetation with view to reduce health impacts from pollen and VOCs.

Scope: The areas of R&I to address the above expected outcomes include:

- Advancing soil-vegetation-atmosphere surface/interface and evapo-transpiration parameterizations, numerical models and data assimilation techniques;
- Further development of surface (sub-)models that can account accurately and dynamically for the sources and sinks of key trace gases and aerosols and are compatible with operational implementation in CAMS global and regional systems;
- Improvement of methodologies to estimate deposition fluxes and associated uncertainties;
- Develop data assimilation approaches to deliver highly resolved deposition products, based on in-situ deposition networks and Earth Observation;
- Development of accurate pollen source models for additional species among the most allergenic ones in Europe (the current pollens in the CAMS portfolio are alder, birch, olive, grass, mugwort, and ragweed);
- Investigation of modelling of pollen at the global scale;
- Development of further use of satellite observations for improving calculation of dry deposition fluxes and emissions.

Eutrophication and acidifications of ecosystems remain among the most sensitive environmental issues which drive the revision of emission reduction strategies (UNECE Gothenburg Protocol, NEC Directive). Pollen and many atmospheric trace components such as VOCs represent major public health issues, affecting hundreds of millions of people globally and in Europe. Elaborated soil-vegetation-atmosphere surface/interface models and associated parameterization are needed to represent emissions, concentrations and deposition of such constituents. Enhanced numerical models, data assimilation and parameterization techniques are needed to characterize the fate of such constituents.

The proposal is expected to develop activities that will improve and expand the operational global and regional atmospheric composition analyses, forecasts, and reanalyses. In addition, the proposal should include some demonstrations of downstream applications that would benefit from these improvements. Synergies with Destination Earth are encouraged.

The main output of the project should be tools and methodologies that can be readily transferred to the CAMS operational global and regional systems. Coordination with CLMS is also encouraged.

The transfer of research results to operations should receive active attention during the project to strengthen the readiness for an operational deployment in the future. Appropriate involvement and/or interaction with the relevant Entrusted Entities of the Copernicus services, the conditions for making available, for re-using and exploiting the results (including IPR) by the said entities must be addressed during the project implementation. Particular attention should be paid to the potential use and complementarities with the products already developed in the other Copernicus services. Strengthening Copernicus services collaboration could be foreseen. Software should be open licensed.

Proposals are encouraged to build on or collaborate with related EU funded projects like SYLVA (biogenic aerosol) or CERTAINTY and CleanCloud on modelling.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL4-2025-02-SPACE-43: Copernicus Anthropogenic CO₂ Emissions Monitoring & Verification Support (CO2MVS) capacity: new and innovative methods to estimate the impact of fires on vegetation and related carbon fluxes

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may</p>

	<p>additionally be used).</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Technology Readiness Level</i>	<p>Activities are expected to achieve TRL 5-6 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector. Activities may start at any TRL.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁰⁴.</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Enable accounting for the interaction between droughts, fires and vegetation in the CO2MVS capacity;
- Improve the estimation of fire emissions in the Copernicus Atmosphere Monitoring Service (CAMS);
- Improve the fire risk forecasting in the Copernicus Emergency Management Service (CEMS);
- Improve the assimilation of Copernicus Land Monitoring Service (CLMS) products in vegetation fire impact and carbon fluxes assessments.

Scope: The areas of R&I to address the above expected outcomes include:

- Better understand and characterise the impact of wildfires on the carbon cycle and on anthropogenic emissions through land use change. This has been recognized especially in the climate community when developing process-based vegetation models for use in climate models. While a large variety of empirical or process-based vegetation models

²⁰⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

exist today, it is still unclear which type of model or degree of complexity is required to model fire adequately at regional to global scales. International collaborations, such as the Fire Model Intercomparison Project (FireMIP), have evaluated existing global fire models against benchmark data sets for present-day and historical conditions;

- Investigate the current state of fire modelling and specifically how the interaction between droughts, fires and vegetation can be accounted for in a global monitoring system, such as the CO2MVS. Because of the monitoring aspects of the CO2MVS, use should be made, where possible, of including observation-based data sets representing certain aspects of the fire-vegetation interaction;
- Investigate how a better understanding of the impact of fires on vegetation can improve the estimates of fire emissions of chemical species and aerosols, and subsequently air quality products in CAMS and the fire risk forecasting in CEMS.

Wildfires have become widespread during summer over many regions of the world, including Europe, and have major safety and larger societal impacts (air quality and health, aviation, weather, agriculture, etc). Wildfires and biomass burning are significant sources of CO₂ and air pollutants in the atmosphere. Fires also change the vegetation and therefore affect the exchange of CO₂ between the biosphere and the atmosphere. Current vegetation and fire models need to be improved to refine the quality of CAMS products (air quality, emissions), the Global Fire Assimilation System (GFAS) supporting CEMS and forcing data sets for climate projections supporting the IPCC. Innovative methodologies should be investigated to include fire-vegetation interactions, also taking into account the impact of drought conditions in global monitoring systems such as the CO2MVS capacity, via the improvement of currently used process-based vegetation models or through empirical models. The use of relevant observation-based data sets (e.g. vegetation states, drought conditions, burnt areas) should be a key element of these methodologies. Current CLMS products should be considered, including options for potential improved specifications. The proposal should include some demonstrations of downstream applications that would benefit from these improvements.

The transfer of research results to operations should receive active attention during the project to strengthen the readiness for an operational deployment in the future. Appropriate involvement and/or interaction with, and/or coordination across the relevant Entrusted Entities of the Copernicus services, the conditions for making available, for re-using and exploiting the results (including IPR) by the said entities must be addressed during the project implementation. Software should be open licensed.

The possible participation of the JRC may consist in (1) ensuring access to relevant models, tools and datasets of the operational CEMS, (2) providing a good understanding of existing operational workflows for CEMS and advice regarding the operational feasibility of new developments and (3) testing of new developments/prototypes for CEMS in a pre-operational setting.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL4-2025-02-SPACE-44: Copernicus Marine Environment Monitoring Service (CMEMS) evolution: new and innovative ocean data assimilation techniques

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-6 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector. Activities may start at any TRL.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the</p>

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁰⁵ .
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- To improve ocean monitoring and predictions, and to remain at the forefront at the international level;
- To ensure CMEMS users take full advantage from advances in observations, reanalysis, analysis and forecasting systems;
- To strengthen data assimilation development exchanges between operational centres and to facilitate scientific community contributions.

Scope: The areas of R&I to address the above expected outcomes include:

- Coupled data assimilation (e.g. between ocean and biogeochemistry, ocean and sea-ice, ocean and waves and atmosphere) to control in a more consistent way the ocean state variables across ocean components or forcings and to get more benefits from observations;
- Development of multi-scale methods capable of assimilating high-resolution and high-frequency observations as well as of constraining larger scales;
- Development of methods to produce reliable estimation of analysis and forecast uncertainties;
- Use of Artificial Intelligence techniques in data assimilation schemes (e.g. use of emulators for ensemble generation, model error estimation, bias correction, separation of scale and model parameter estimation);
- Use of new types of observations (e.g. new Sentinel Expansion and Next Generation missions, new in-situ observations) or higher-resolution of existing data streams;
- Development of methods and tools to systematically assess the observing system impact in data assimilation systems (e.g. analysis and forecast sensitivity to observation);
- The development of software infrastructure that can accommodate different assimilation methods (including artificial intelligence techniques), and facilitate the sharing of algorithms and optimization of computer codes (assimilation schemes) on high-performance computers;

²⁰⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- The development of validation and intercomparison protocols to estimate and quantify the benefits of improved assimilation methods and integration of new observations (e.g. data challenges, use of OSSEs).

The development of new types of observations from satellites and in-situ and the improvement of space/time sampling of existing observations require a step change in data assimilation techniques to fully benefit from these new sources of data. Current techniques are facing hard limits to progress and need new approaches to make the best use of observation and advances in modelling (e.g. resolution). Emerging coupling, multi-scale, ensemble and artificial intelligence techniques represent new opportunities for significant improvements in ocean data assimilation. The proposal should include some demonstrations of downstream applications that would benefit from these improvements.

The transfer of research results to operations should receive active attention during the project to strengthen the readiness for an operational deployment in the future. Appropriate involvement and/or interaction with the relevant Entrusted Entities of the Copernicus services, the conditions for making available, for re-using and exploiting the results (including IPR) by the said entities must be addressed during the project implementation. Software should be open licensed.

Potential contributions to the European Digital Twin Ocean and the GEO Blue Planet initiative should also receive attention during the project, given that the CMEMS is and should remain an important player in these initiatives. International cooperation is hence encouraged in this topic.

Actions are encouraged to build on or cooperate with previous or ongoing Horizon funded projects contributing to different components of the global ocean observing value chain, for example - but not limited to - LandSeaLot, EPOC, EERIE, ObsSea4Clim, etc.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL4-2025-02-SPACE-45: Supporting the AI/ML digital transition of Copernicus Services

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.

<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: Subject to restrictions for the protection of European communication networks.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-6 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector. Activities may start at any TRL.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁰⁶.</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Integrated AI/ML strategy across Copernicus Services, value chains and workflows;
- Improved quality, timeliness, reliability and resilience of Copernicus data, products and applications;
- Improved time-to-solution and energy-to-solution of Copernicus operational workflows;

²⁰⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Transformed user experience through enhanced interactivity and on-demand capabilities for Copernicus services;
- Exchange of knowledge, benchmarking and best practices on using AI/ML in the context of Copernicus;
- Enhanced AI-readiness of Copernicus data, in particular open and free high-value labelled Copernicus data sets.

Scope: The areas of R&I to address the above expected outcomes include:

- AI-supported retrieval algorithms on both passive and active sensing for existing and upcoming Copernicus missions;
- Fast, reliable, consistent, and as much as possible sensor agnostic identification of clouds and shadows in optical sensing;
- Multi-source multi-target AI models for automatic segmentation;
- Physics parameterization and parameter optimization to emulate poorly understood processes and increase the fidelity of numerical models;
- Fault and outlier detection in production and delivery workflows to ensure more robust services;
- Support to automated pre-processing and QA/QC of observations and data to reduce the risk of man-made errors and product deficiencies;
- Data fusion techniques towards added-value products;
- Data compression and mining methods to navigate big data efficiently, as the amount of data is becoming a limiting factor;
- Hybrid observation operator, ensemble data assimilation techniques, error calibration and uncertainty quantification towards improved (re-)analysis and forecast skill;
- Analysis-driven Earth system deep learning models to boost prediction skill and timeliness, including with Digital Twin Earth models. These methods have shown great promises when applied to reanalyses for example;
- Experimenting observation(-only)-driven forecasting to support time-critical service elements, circumventing analysis steps. These approaches could be particularly suited for observation-dense areas from which processes can be inferred from observations alone;
- Exploring the potential of large pre-trained foundation models and transfer learning at scale for Earth system modelling, including with publicly available training datasets from Copernicus;

- Downscaling and super resolution applications building on Copernicus data to refine products in space and time;
- Adaptive workflow optimizations;
- Enhanced interactive interfaces enabling on-demand product and service generation;
- Chatbots that can guide the user across a wide range of information sources within and across Copernicus services for enhanced user support and experience.

Proposals are expected to address as many of the above areas as possible.

During the last decade, artificial intelligence (AI), machine learning, big data volumes and computing capacities have developed at an unprecedented pace, and it is now evident that Copernicus needs to become even more proactive on the digital transition. AI and machine learning offer great opportunities across the Copernicus value chain and workflows to deeply transform its data, products, applications, services and user experience.

However, the scope and speed of developments also generate challenges, in particular regarding the necessary know-how that needs to be established, the software and hardware infrastructure that need to be developed, and the integration of machine learning and conventional tools within production workflows. These challenges need to be addressed within a comparably short period of time to keep up with evolving user requirements and to leverage emerging AI/ML developments. The project is expected to foster game changer and disruptive approaches in particular towards next generation Earth system (re-)analysis and prediction systems as well as foundation models, to promote integrated AI/ML strategies and intensive cooperation and knowledge transfer with and across Entrusted Entities to pave the way into the future of Copernicus. Given the QA/QC requirements on Copernicus products, explainable, trustworthy, open-source and responsible use of AI approaches are of particular interest, as AI mainly operates as a black box. In the context of recent EU policies, a robust framework is required to ensure the same stringent quality, reliability, and verifiability requirements of AI-generated products, as well as transparency and clearly labelled information to users. Benchmarking approaches to quantify the positive impact and improvements of AI/ML methods over time are particularly encouraged.

Collaboration with the EuroGEO initiative and the project(s) funded from the topic HORIZON-CL6-2025-03-GOVERNANCE-09: Delivering Earth Intelligence to accelerate the green and digital transition is encouraged.

The transfer of research results to operations should receive active attention during the project to strengthen the readiness for an operational deployment in the future. Appropriate involvement and/or interaction with the relevant Entrusted Entities of the Copernicus services and Destination Earth, the conditions for making available, for re-using and exploiting the results (including IPR) by the said entities must be addressed during the project implementation.

The possible participation of the JRC may consist in (1) ensuring access to relevant models, tools and datasets of the operational CEMS and CLMS, (2) providing a good understanding of existing operational workflows for CEMS/CLMS and advice regarding the operational feasibility of new developments and (3) testing of new developments/prototypes for CEMS/CLMS in a pre-operational setting.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL4-2025-02-SPACE-46: Innovative Earth observation services in support of maritime litter detection and ship source pollution policies

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: Subject to restrictions for the protection of European communication networks.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and</i>	The rules are described in General Annex G. The following exceptions

<i>financial set-up of the Grant Agreements</i>	apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁰⁷ .
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- National maritime authorities and enforcement bodies will benefit from improved detection services to fulfil the requirements of the Ship Sourced Pollution Directive (SSPD), ultimately resulting in a higher environmental protection of sea waters and preservation of marine ecosystems;
- Increased accuracy from the developed solutions will allow more efficient and quick responses to potential spill incidents.

Scope: The project should address the following points:

- Development and demonstration of space sensors, including the assessment of their operational boundaries and associated technical confidence levels, for the following use cases:
 - o Estimation of oil spill volume and thickness, in conjunction with the identification of oil types using for instance oil spectral signatures;
 - o Detection of oil spills in sea ice conditions;
 - o Detection and identification of chemical products on the sea surface (MARPOL Annex II);
 - o Detection and identification of sewage on the sea surface (MARPOL Annex IV);
 - o Detection and identification of garbage on the sea surface (MARPOL Annex V);
 - o Detection and identification of exhaust gas cleaning system residue, and monitoring of single-vessel methane emissions (MARPOL Annex VI);
 - o Detection and identification of the possible polluter using vessel unique spectral signature;

²⁰⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Design and improvement of use artificial intelligence methods for the identification of spills, sewage and garbage on the sea surface and their characteristics to achieve a higher level of timeliness, automation and confidence (e.g. avoid false alerts).

Context:

The MARPOL convention adopted at the IMO level regulates the release at sea of substances originating from ships, be it from the ship's operation or cargo operations. The Ship Source Pollution Directive adopted in 2005 seeks to strengthen the enforcement in the EU of the prohibition of release at sea of substances under Annex I and II of the MARPOL convention. Currently, high-resolution satellite imagery of the ocean surface is used to monitor and detect potential spill, notably through the CleanSeaNet service, offered by the European Maritime Safety Agency.

The revision of the Directive will expand its scope to discharges in the water under all MARPOL annexes. Further research is needed to adapt the current monitoring systems to the accurate detection of the substances included under the revised scope of the SSPD as the technologies may not be available or accurate enough.

The objective of this topic is to support R&I activities developing advanced technological solutions, that will allow to enhance the service provided to Member States for the detection of potential spills and identification of potential polluters.

R&I activities should complement what is currently being done by EMSA, along CleanSeaNet and the Copernicus maritime surveillance service. Moreover, the Copernicus Security Services Strategic Research Agenda (CSS-SRA) provides, on a yearly basis, an overview of R&D activities, as well as proposed actions based on latest developments. Applicants are invited to consult the corresponding additional requirements and information based on the CSS-SRA²⁰⁸ and subsequent updates when they become available to develop their proposal.

The transfer of research results to operations should receive active attention during the project to strengthen the readiness for an operational deployment in the future. Appropriate involvement and/or interaction with EMSA, the conditions for making available, for re-using and exploiting the results (including IPR) by the said entities must be addressed during the project implementation. Proposals are encouraged to connect with and contribute to both the EU Mission Restore our Ocean and Waters and the UN Decade of Ocean Science for Sustainable Development 2021-2030.

208 [JRC Publications Repository - The Strategic Research Agenda for Copernicus Security Service 2023](https://publications.europa.eu/en/publication-detail/-/publication/00000000-0000-0000-0000-000000000000)
(europa.eu)

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

Heading 5 - Using Space on Earth – Satellite navigation

For a description of topics related to the development of Galileo and EGNOS, please refer to “Public Procurement” and to “Indirectly managed actions by ESA” in the section “Other Actions” of this work programme.

Heading 6 - Using Space on Earth – Services & Data coming from satellites, both Earth Observation and navigation

For a description of topics related to the development of applications for Galileo, EGNOS and Copernicus, please refer to “Indirectly managed actions by EUSPA” in the section “Other Actions” of this work programme.

Heading 7 - Monitoring Space

For a description of topics related to SSA-SST, please refer to “Identified beneficiaries” in the section “Other Actions” of this work programme.

Heading 8 – Boosting Space through non-dependence of the EU for key critical space technologies

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-02-SPACE-71: Space Critical EEE Components for EU non-dependence – RISC-V Microprocessor on 7nm

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.50 and 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 80 pages.
<i>Eligibility</i>	The conditions are described in General Annex B. The following

<i>conditions</i>	<p>exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely avoiding a situation of technological dependency on a non-EU source, in a global context that requires the EU to build on its strengths and to carefully assess and address strategic weaknesses, vulnerabilities and high-risk dependencies, participation is limited to legal entities established in Member States and the following associated countries: Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.²⁰⁹</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	<p>Activities are expected to achieve TRL 5 by the end of the project. Activities may start at TRL 3. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.</p>
<i>Evaluation and</i>	<p>The evaluation committee will be composed partially by representatives</p>

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The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

<i>award procedure</i>	of EU institutions.
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Reinforcing EU strategic autonomy by reducing non-EU dependencies on critical space EEE components and related technologies across their entire supply chain;
- Providing unrestricted access to critical space EEE components and related technologies relevant for EU space missions;
- Developing or regaining capacity to operate independently in space by developing resilient space EEE components and related technologies supply chains, relying on EU supply chains and/or trustable and reliable supply chains not affected by non-EU export restrictions;
- Enhancing competitiveness by developing products and capabilities reaching equivalent or superior performance level than those from outside the EU and compete at worldwide level;
- Opening new opportunities for manufacturers by reducing dependency on non-EU export restricted technologies.

Scope: Unrestricted access to state-of-art space EEE components and related technologies is a pre-requisite for the EU space industry responding to EU space missions. However, especially for some families of components, the available solutions in EU do not meet the current high-performance space requirements. Currently, alternative products sourced from outside EU, are either affected by non-EU export control, that limits its use, or present challenges in terms of trustable supply chains for the implementation of EU space missions with a security dimension.

Within the frame of this topic, it is expected to finance and implement development projects aiming at maturing critical space EEE components with the final goal of lowering the dependency from outside EU. This will be done by establishing a long-term sustainable supply chain for supporting EU strategic autonomy in the space sector. The selection of the supply chains shall reflect this objective. Therefore, the supply chain shall preferably be built fully based in EU and when this can only be achieved partially (i.e. because of lack of current EU capabilities for unrestricted advanced semiconductor processes or advanced materials that cannot be developed within the project), services procured from outside EU shall nevertheless ensure that the overall supply chain will remain trustable and not affected by non-EU export control. The latest scenario is subject to the approval of the granting authority.

Below, the space EEE component and related technologies relevant for this Call. It has been identified based on needs related to strategic institutional space programs, inputs from European stakeholders and the EU Observatory of Critical Technologies.

- RISC-V microprocessors on 7nm technology node [Target final TRL 5]

Additional, context information and technical requirements are provided in the Technical Requirements Guidance document published on the Funding & Tenders Portal. Space is a low volume market affected by a dynamic industrial landscape compared to the terrestrial market therefore, technological spin in and/or bilateral collaborations should be enhanced between European non-space and space industries. Furthermore, proposed activities should be complementary to relevant national or other activities at European level. Complementary activities should be clearly identified, described and the proposal should report how the complementarity is ensured.

To achieve the non-dependence objective, applicants are expected to include a dedicated proposal's paragraph covering:

- The description of the technology and/or technology processes and high-level breakdown of the space EEE component supply chain to be used. Applicants should demonstrate that the supply chain and final product are free of any legal export restrictions or limitations, such as those established in the International Traffic in Arms Regulations (ITAR) or equivalent instruments applicable in other non-EU jurisdictions. Applicants shall also report, in a dedicated subsection, if and which part of the supply chain is affected by non-EU export controls such as the Export Administration regulation (EAR) i.e. EAR99.
- The description of the suitable technology development process that has been identified and set up within the consortium for avoiding export restrictions of non-EU states and assess vulnerabilities of the supply chain.

Proposal covering space EEE components and related technology developments that are targeting a final TRL equal or higher than 5, shall include a list of proposed applicable standards (e.g. EN, ECSS, ESCC, MIL, JEDEC,...) that are considered relevant for implementing a formal space evaluation and/or qualification. Additionally, projects that aim at a formal space qualification shall deliver the full data pack planned to be submitted to the qualification authority. This deliverable shall be marked sensitive and it shall be shared with the granting authority (i.e. DG-DEFIS and HaDEA). Products that will successfully complete the space evaluation/qualification, either within the EU-COM activity or as a consecutive follow up, shall inform DG-DEFIS and engrave on the package the EU flag.

The proposal must include specific tasks as part of the work plan and related dedicated confidential deliverables to be provided within 6 months from the start of the project to the relevant Commission DG and Executive Agency (i.e. DG-DEFIS and HaDEA), with the objective of:

1. Analysing and describing, **in detail**, the full supply chain, each entity and its role in the supply chain, level of criticality and, if relevant, identify dependencies from outside EU;
2. Describing the industrial technical roadmap and a business plan for commercialization with accurate understanding of applications needs, space mission insertion, including time to market indication, of the developed product.

3. Reporting the list of relevant non-EU export control with extra territorial applicability for the specific technology/product under development, independently from the supply chain established for the EU-COM project.
4. Undertaking a comprehensive literature review of the relevant technology/product reporting the state-of-the-art and highlighting potential gaps between current EU solutions and competition from outside EU.

Unless otherwise agreed with the granting authority before the grant agreement, beneficiaries must ensure that none of the entities that participate as affiliated entities, associated partners or subcontractors are established in countries which are not eligible countries or target countries set out in the call conditions.

It is recalled to the applicants that all provisions reported by the Model Grant Agreements, related to topics with restricted eligibility conditions, are applied. For example, under this light, the consortiums shall ensure that for a period up to 4 years after the end of the action, supply and availability of the products and/or processes developed and/or qualified within the project (consortium as whole or individual beneficiaries) shall be given to any entity in EU, at fair and reasonable market prices, conditions and with no legal restrictions and limitations stemming for example from International Traffic in Arms Regulations (ITAR), or equivalent instruments applicable in non-EU jurisdictions. Additionally, beneficiaries that intend to transfer ownership or grant an exclusive licence must formally notify the granting authority (i.e. DG-DEFIS and HaDEA) before the intended transfer or licensing takes place and the granting authority may up to four years after the end of the action object to a transfer of ownership or the exclusive licensing of results.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not relevant.

HORIZON-CL4-2025-02-SPACE-72: Space Critical Equipment and Related Technologies for EU non-dependence – Chip Scale Atomic Clocks and Solar Cells

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.50 and 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply:

	The page limit of the application is 80 pages.
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely avoiding a situation of technological dependency on a non-EU source, in a global context that requires the EU to build on its strengths and to carefully assess and address strategic weaknesses, vulnerabilities and high-risk dependencies, participation is limited to legal entities established in Member States and the following associated countries: Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.²¹⁰</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	<p>Activities are expected to achieve TRL 5-6 by the end of the project.</p> <p>Activities may start at TRL 3. The reference TRL definition is the ISO</p>

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The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

	16290:2013 applicable to the space sector.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering all the development areas described in the scope section, grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each development area, provided that the applications attain all thresholds</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Reinforcing EU strategic autonomy by reducing non-EU dependencies on critical space equipment and related technologies across their entire supply chain;
- Providing unrestricted access to critical space equipment and related technologies relevant for EU space missions;
- Developing or regaining capacity to operate independently in space by developing resilient critical space equipment and related technologies supply chains, relying on EU supply chains and/or trustable and reliable supply chains not affected by non-EU export restrictions;
- Enhancing competitiveness by developing products and capabilities reaching equivalent or superior performance level than those from outside the EU and compete at worldwide level;
- Opening new opportunities for manufacturers by reducing dependency on non-EU export restricted technologies.

Scope: Unrestricted access to state-of-art space equipment and related technologies is a pre-requisite for the EU space industry responding to EU space missions. However, especially for some families of equipment, the available solutions in EU do not meet the current high-performance space requirements and alternative products, sourced from outside EU, are either affected by non-EU export control with extra territorial applicability, that limit the access, re-export or raise challenges in terms of trustable supply chains for the implementation of EU space missions with a security dimension.

Within the frame of this topic it is expected to finance and implement development projects aiming at maturing critical space equipment with the final goal of lowering the dependency from outside EU, establish a long-term sustainable supply chain and support EU strategic autonomy in the space sector. The selection of the supply chains shall reflect this objective. Therefore, the supply chain shall preferably be built fully based in EU and when this can only be achieved partially (i.e. because of lack of current EU capabilities that cannot be developed within the project), services procured from outside EU shall nevertheless ensure that the

overall supply chain will remain trustable and not affected by non-EU export control. The latest scenario is subject to the approval of the granting authority.

Below, the list of space equipment and related technologies relevant for this Call. It has been identified based on needs related to strategic institutional programs, inputs from relevant European stakeholders and the EU Observatory of Critical Technologies.

- Chip Scale Atomic Clocks [Target final TRL 6]
- Solar Cells [Target final TRL 5-6]

Additional, context information and technical requirements are provided in the Technical Requirements Guidance document published on the Funding & Tenders Portal outlining all relevant information for each of the above-mentioned development lines.

A proposal should address only one technology area and clearly identify the area being addressed.

Space is a low volume market affected by a dynamic industrial landscape compared to the terrestrial market therefore, technological spin in and/or bilateral collaborations should be enhanced between European non-space and space industries. Furthermore, proposed activities should be complementary to relevant national and/or other activities at European level. Complementary activities should be clearly identified, described and the proposal should report how the complementarity is ensured.

To achieve the non-dependence objective, applicants must include a dedicated proposal's paragraph covering:

- The description of the technology and high-level breakdown of the space equipment supply chain to be used. Applicants should demonstrate that the supply chain and final product are free of any legal export restrictions or limitations, such as those established in the International Traffic in Arms Regulations (ITAR) or equivalent instruments applicable in other non-EU jurisdictions. Applicants shall also report, in a dedicated subsection, if and which part of the supply chain is affected by non-EU export controls such as the Export Administration regulation (EAR).
- The description of the suitable technology development process that has been identified and set up within the consortium for avoiding export restrictions of non-EU states and assess vulnerabilities of the supply chain.

Proposal covering space equipment and related technology developments that are targeting a final TRL equal or higher than 5, shall include a list of proposed applicable standards (e.g. ECSS, ESCC, MIL, JEDEC, ...) that are considered relevant for implementing a formal space evaluation and/or qualification.

The proposal must include specific tasks as part of the work plan and related dedicated confidential deliverables to be provided within 6 months from the start of the project to the

relevant Commission DG and Executive Agency (i.e. DG-DEFIS and HaDEA), with the objective of:

1. Analysing and describing, **in detail**, the full supply chain, each entity and its role in the supply chain, level of criticality and, if relevant, identify dependencies from outside EU;
2. Describe the industrial technical roadmap and a business plan for commercialization with accurate understanding of applications needs, space mission insertion, including time to market indication, of the developed product.
3. Reporting the list of relevant non-EU export control with extra territorial applicability for the specific technology/product under development, independently from the supply chain established for the EU-COM project.
4. Undertaking a comprehensive literature review of the relevant technology/product reporting the state-of-the-art and highlighting potential gaps between current EU solutions and competition from outside EU.

Unless otherwise agreed with the granting authority before the grant agreement is signed, beneficiaries must ensure that none of the entities that participate as affiliated entities, associated partners or subcontractors are established in countries which are not eligible countries or target countries set out in the call conditions.

It is recalled to the applicants that all provisions reported by the Model Grant Agreements, related to topics with restricted eligibility conditions, are applied. Under this light, for example the consortiums shall ensure that for a period up to 4 years after the end of the action, supply and availability of the products and/or processes developed and/or qualified within the project (consortium as whole or individual beneficiaries) shall be given to any entity in EU, at fair and reasonable market prices, conditions and with no legal restrictions and limitations stemming for example from International Traffic in Arms Regulations (ITAR), or equivalent instruments applicable in non-EU jurisdictions. Additionally, beneficiaries that intend to transfer ownership or grant an exclusive licence must formally notify the granting authority before the intended transfer or licensing takes place and the granting authority may up to four years after the end of the action object to a transfer of ownership or the exclusive licensing of results.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not relevant.

HORIZON-CL4-2025-02-SPACE-73: Space Critical EEE Components for EU non-dependence - Connectors

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU</i>	The Commission estimates that an EU contribution of between EUR 0.80

<i>contribution per project</i>	and 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>The page limit of the application is 80 pages.</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely avoiding a situation of technological dependency on a non-EU source, in a global context that requires the EU to build on its strengths and to carefully assess and address strategic weaknesses, vulnerabilities and high-risk dependencies, participation is limited to legal entities established in Member States and the following associated countries: Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.²¹¹</p>

²¹¹ The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity,

	If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-6 by the end of the project. Activities may start at TRL 3. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: The granting authority can fund a maximum of one project.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Reinforcing EU strategic autonomy by reducing non-EU dependencies on critical space EEE components and related technologies across their entire supply chain;
- Providing unrestricted access to critical space EEE components and related technologies relevant for EU space missions;
- Developing or regaining capacity to operate independently in space by developing resilient space EEE components and related technologies supply chains, relying on EU supply chains and/or trustable and reliable supply chains not affected by non-EU export restrictions;
- Enhancing competitiveness by developing products and capabilities reaching equivalent or superior performance level than those from outside the EU and compete at worldwide level;
- Opening new opportunities for manufacturers by reducing dependency on non-EU export restricted technologies.

Scope: Unrestricted access to state-of-art space EEE components and related technologies is a pre-requisite for the EU space industry responding to EU space missions. However, especially for some families of components, the available solutions in EU do not meet the current high-performance space requirements. Currently, alternative products sourced from outside EU, are either affected by non-EU export control, that limits its use, or present challenges in terms of trustable supply chains for the implementation of EU space missions with a security dimension.

Within the frame of this topic, it is expected to finance and implement development projects aiming at maturing critical space EEE components with the final goal of lowering the

and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

dependency from outside EU. This will be done by establishing a long-term sustainable supply chain for supporting EU strategic autonomy in the space sector. The selection of the supply chains shall reflect this objective. Therefore, the supply chain shall preferably be built fully based in EU and when this can only be achieved partially (i.e. because of lack of current EU capabilities for unrestricted advanced semiconductor processes or advanced materials that cannot be developed within the project), services procured from outside EU shall nevertheless ensure that the overall supply chain will remain trustable and not affected by non-EU export control. The latest scenario is subject to the approval of the granting authority.

Below, the space EEE component and related technologies relevant for this Call. It has been identified based on needs related to strategic institutional space programs, inputs from European stakeholders and the EU Observatory of Critical Technologies:

- Connectors [Target final TRL 5-6]

Additional context information and technical requirements are provided in the Technical Requirements Guidance document published on the Funding & Tenders Portal.

Space is a low volume market affected by a dynamic industrial landscape compared to the terrestrial market therefore, technological spin in and/or bilateral collaborations should be enhanced between European non-space and space industries. Furthermore, proposed activities should be complementary to relevant national and/or other activities at European level. Complementary activities should be clearly identified, described and the proposal should report how the complementarity is ensured.

To achieve the non-dependence objective, applicants are expected to include a dedicated proposal's paragraph covering:

- The description of the technology and/or technology processes and high-level breakdown of the space EEE component supply chain to be used. Applicants should demonstrate that the supply chain and final product are free of any legal export restrictions or limitations, such as those established in the International Traffic in Arms Regulations (ITAR) or equivalent instruments applicable in other non-EU jurisdictions. Applicants shall also report, in a dedicated subsection, if and which part of the supply chain is affected by non-EU export controls such as the Export Administration regulation (EAR) i.e. EAR99.
- The description of the suitable technology development process that has been identified and set up within the consortium for avoiding export restrictions of non-EU states and assess vulnerabilities of the supply chain.

Proposal covering space EEE components and related technology developments that are targeting a final TRL equal or higher than 5, shall include a list of proposed applicable standards (e.g. EN, ECSS, ESCC, MIL, JEDEC,...) that are considered relevant for implementing a formal space evaluation and/or qualification. Additionally, projects that aim at a formal space qualification shall deliver the full data pack planned to be submitted to the qualification authority. This deliverable shall be marked sensitive and it shall be shared with

the granting authority (i.e. DG-DEFIS and HaDEA). Products that will successfully complete the space evaluation/qualification either within the EU-COM activity or as a consecutive follow up shall inform DG-DEFIS and engrave on the package, or if relevant, die the EU flag.

The proposal must include specific tasks as part of the work plan and related dedicated confidential deliverables to be provided within 6 months from the start of the project to the relevant Commission DG and Executive Agency (i.e. DG-DEFIS and HaDEA), with the objective of:

- Analysing and describing, **in detail**, the full supply chain, each entity and its role in the supply chain, level of criticality and, if relevant, identify dependencies from outside EU;
- Describing the industrial technical roadmap and a business plan for commercialization with accurate understanding of applications needs, space mission insertion, including time to market indication, of the developed product.
- Reporting the list of relevant non-EU export control with extra territorial applicability for the specific technology/product under development, independently from the supply chain established for the EU-COM project.
- Undertaking a comprehensive literature review of the relevant technology/product reporting the state-of-the-art and highlighting potential gaps between current EU solutions and competition from outside EU.

Unless otherwise agreed with the granting authority before the grant agreement, beneficiaries must ensure that none of the entities that participate as affiliated entities, associated partners or subcontractors are established in countries which are not eligible countries or target countries set out in the call conditions.

It is recalled to the applicants that all provisions reported by the Model Grant Agreements, related to topics with restricted eligibility conditions, are applied. For example, under this light, the consortiums shall ensure that for a period up to 4 years after the end of the action, supply and availability of the products and/or processes developed and/or qualified within the project (consortium as whole or individual beneficiaries) shall be given to any entity in EU, at fair and reasonable market prices, conditions and with no legal restrictions and limitations stemming for example from International Traffic in Arms Regulations (ITAR), or equivalent instruments applicable in non-EU jurisdictions. Additionally, beneficiaries that intend to transfer ownership or grant an exclusive licence must formally notify the granting authority (i.e. DG-DEFIS and HaDEA) before the intended transfer or licensing takes place and the granting authority may up to four years after the end of the action object to a transfer of ownership or the exclusive licensing of results.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not relevant.

HORIZON-CL4-2025-02-SPACE-74: Space Critical EEE Components for EU non-dependence – Advanced Packages and Memories

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 2.50 and 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>The page limit of the application is 80 pages.</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely avoiding a situation of technological dependency on a non-EU source, in a global context that requires the EU to build on its strengths and to carefully assess and address strategic weaknesses, vulnerabilities and high-risk dependencies, participation is limited to legal entities established in Member States and the following associated countries: Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication</p>

	<p>networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.²¹²</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	<p>Activities are expected to achieve TRL 6-7 by the end of the project. Activities may start at TRL 3 for what concerns advanced packages while TRL 5 for what concerns memories. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering all the development areas described in the scope section, grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each development area, provided that the applications attain all thresholds</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Reinforcing EU strategic autonomy by reducing non-EU dependencies on critical space EEE components and related technologies across their entire supply chain;
- Providing unrestricted access to critical space EEE components and related technologies relevant for EU space missions;
- Developing or regaining capacity to operate independently in space by developing resilient space EEE components and related technologies supply chains, relying on EU supply chains and/or trustable and reliable supply chains not affected by non-EU export restrictions;

²¹²

The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

- Enhancing competitiveness by developing products and capabilities reaching equivalent or superior performance level than those from outside the EU and compete at worldwide level;
- Opening new opportunities for manufacturers by reducing dependency on non-EU export restricted technologies.

Scope: Unrestricted access to state-of-art space EEE components and related technologies is a pre-requisite for the EU space industry responding to EU space missions. However, especially for some families of components, the available solutions in EU do not meet the current high-performance space requirements. Currently, alternative products sourced from outside EU, are either affected by non-EU export control, that limits its use, or present challenges in terms of trustable supply chains for the implementation of EU space missions with a security dimension.

Within the frame of this topic, it is expected to finance and implement development projects aiming at maturing critical space EEE components with the final goal of lowering the dependency from outside EU. This will be done by establishing a long-term sustainable supply chain for supporting EU strategic autonomy in the space sector. The selection of the supply chains shall reflect this objective. Therefore, the supply chain shall preferably be built fully based in EU and when this can only be achieved partially (i.e. because of lack of current EU capabilities for unrestricted advanced semiconductor processes or advanced materials that cannot be developed within the project), services procured from outside EU shall nevertheless ensure that the overall supply chain will remain trustable and not affected by non-EU export control. The latest scenario is subject to the approval of the granting authority.

Below, the list of space EEE components and related technologies relevant for this Call. It has been identified based on needs related to strategic institutional space programs, inputs from European stakeholders and the EU Observatory of Critical Technologies:

- Advanced packages – Organic substrate for very high, fine pitch [Target final TRL 6-7]
- MRAM Memories [Target final TRL 7]

Additional context information and technical requirements are provided in the Technical Requirements Guidance document published on the Funding & Tenders Portal outlining all relevant information for each of the above-mentioned development lines.

A proposal should address only one technology area and clearly identify the area being addressed.

Space is a low volume market affected by a dynamic industrial landscape compared to the terrestrial market therefore, technological spin in and/or bilateral collaborations should be enhanced between European non-space and space industries. Furthermore, proposed activities should be complementary to relevant national and/or other activities at European level. Complementary activities should be clearly identified, described and the proposal should report how the complementarity is ensured.

To achieve the non-dependence objective, applicants are expected to include a dedicated proposal's paragraph covering:

- The description of the technology and/or technology processes and high-level breakdown of the space EEE component supply chain to be used. Applicants should demonstrate that the supply chain and final product are free of any legal export restrictions or limitations, such as those established in the International Traffic in Arms Regulations (ITAR) or equivalent instruments applicable in other non-EU jurisdictions. Applicants shall also report, in a dedicated subsection, if and which part of the supply chain is affected by non-EU export controls such as the Export Administration regulation (EAR) i.e. EAR99.
- The description of the suitable technology development process that has been identified and set up within the consortium for avoiding export restrictions of non-EU states and assess vulnerabilities of the supply chain.

Proposal covering space EEE components and related technology developments that are targeting a final TRL equal or higher than 5, shall include a list of proposed applicable standards (e.g. EN, ECSS, ESCC, MIL, JEDEC,...) that are considered relevant for implementing a formal space evaluation and/or qualification. Additionally, projects that aim at a formal space qualification shall deliver the full data pack planned to be submitted to the qualification authority. This deliverable shall be marked sensitive and it shall be shared with the granting authority (i.e. DG-DEFIS and HaDEA). Products that will successfully complete the space evaluation/qualification either within the EU-COM activity or, as a consecutive follow up, shall inform DG-DEFIS and engrave on the package (if present) the EU flag.

The proposal must include specific tasks as part of the work plan and related dedicated confidential deliverables to be provided within 6 months from the start of the project to the relevant Commission DG and Executive Agency (i.e. DG-DEFIS and HaDEA), with the objective of:

- Analysing and describing, **in detail**, the full supply chain, each entity and its role in the supply chain, level of criticality and, if relevant, identify dependencies from outside EU;
- Describing the industrial technical roadmap and a business plan for commercialization with accurate understanding of applications needs, space mission insertion, including time to market indication, of the developed product.
- Reporting the list of relevant non-EU export control with extra territorial applicability for the specific technology/product under development, independently from the supply chain established for the EU-COM project.
- Undertaking a comprehensive literature review of the relevant technology/product reporting the state-of-the-art and highlighting potential gaps between current EU solutions and competition from outside EU.

Unless otherwise agreed with the granting authority before the grant agreement, beneficiaries must ensure that none of the entities that participate as affiliated entities, associated partners or subcontractors are established in countries which are not eligible countries or target countries set out in the call conditions.

It is recalled to the applicants that all provisions reported by the Model Grant Agreements, related to topics with restricted eligibility conditions, are applied. For example, under this light, the consortiums shall ensure that for a period up to 4 years after the end of the action, supply and availability of the products and/or processes developed and/or qualified within the project (consortium as whole or individual beneficiaries) shall be given to any entity in EU, at fair and reasonable market prices, conditions and with no legal restrictions and limitations stemming for example from International Traffic in Arms Regulations (ITAR), or equivalent instruments applicable in non-EU jurisdictions. Additionally, beneficiaries that intend to transfer ownership or grant an exclusive licence must formally notify the granting authority (i.e. DG-DEFIS and HaDEA) before the intended transfer or licensing takes place and the granting authority may up to four years after the end of the action object to a transfer of ownership or the exclusive licensing of results.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not relevant.

Heading 9 – Boosting Space through international cooperation

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-02-SPACE-81: EU-Japan cooperation on the exploitation of Quantum Space Gravimetry data

Call: SPACE-HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 0.45 and 0.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 0.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: Subject to restrictions for the protection of European communication networks.</p> <p>The following additional eligibility criteria apply: In order to achieve</p>

	<p>the expected outcome of the action, the consortium must include at least one legal entity established in Japan.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 3 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector. Activities may start at any TRL.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²¹³.</p>

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

- Support the EU space policy and the EU green deal by preparing the grounds for an innovative Quantum Space Gravimetry (QSG) mission.
- Foster EU-Japan cooperation in the field of quantum sensing from space.
- Allow scientists from EU and Japan to prepare for the exploitation of QSG mission data.

Scope: The development of quantum sensing technology brings several promises and expectations, in terms of sensor performances and stability. However, in order to best exploit quantum sensors, it is critical to prepare the scientific community to use the data generated by such sensors, develop new or tailor existing processing algorithms, and initiate and develop new applications based on this enhanced data.

The objective of this call is to prepare the grounds for the exploitation of Quantum Space Gravimetry mission data and foster the cooperation between the EU and Japan scientific

²¹³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

communities on the topic. Effective QSG data exploitation requires research and dissemination activities to demonstrate the benefits of space-borne gravity field data and involve the relevant user institutions at early stage. To achieve this objective, one proposal will be selected. The proposal will identify Earth science fields relying on space gravity data exploitation and of mutual EU-Japan interest and will propose innovative algorithmic solutions highlighting the benefits of quantum space gravimetry. The proposal will discuss the expected QSG mission performance.

Horizon Europe will fund EU scientists only. Japan scientists will fund their own activities, expected to be at the same level as the EU contribution.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

Heading 10 – Boosting Space through training and education activities

For a description of topics related to training and education activities please refer to “Public Procurement” in the section “Other Actions” of this work programme.

Heading 11 – Boosting Space through IOD/IOV opportunities

For a description of topics related to the IOD & IOV opportunities, please refer to please refer to "Indirectly managed actions by ESA" in the section "Other Actions" of this work programme.

Heading 12 – Boosting Space through support to entrepreneurship

For a description of topics related to Cassini Entrepreneurship, please refer to “Public Procurement” in the section “Other Actions” of this work programme

Destination 6: Digital and industrial technologies driving human-centric innovation

New ways of working, assisted by technologies for physical or cognitive augmentation (exoskeletons, digital twins, collaborative AI, virtual and extended reality) will increase efficiency, safety and quality of work, provided they are trustworthy, safe and reliable, as well as human-centric and free from gender, racial and other social biases by design. Within the dynamic context of flexible organisation and process flows, workers will have to be empowered to co-create their new forms of working and collaboration within and across organisations, through participation, social innovation or living labs, where social economy actors and local grassroots initiatives are of particular importance. New job profiles and skills will emerge, often requiring digital competence, in addition to social and green skills (e.g. awareness of impact, circularity options). Continuous learning, through formal training, on-the-job learning or being immersed in virtual worlds, combined with appropriate certification and reward mechanisms can boost the attractiveness of careers in many sectors, including manufacturing. A new dynamic, in the spirit of Industry 5.0, will be brought to the workplace through better human interaction with production technologies, open innovation, supporting young professionals' innovations in e.g. manufacturing, as well as participation of new actors, such as fablabs. Digital environments and virtual worlds will enable new forms of collaboration in generating new product and process ideas, assisted by digital twins and AI, in an inclusive, trustworthy and ethical fashion.

Just like today's internet, the future internet will drive industrial, social and cultural innovation. Destination 6 will develop technologies for an inclusive, gender-equal, trustworthy and humancentric internet. This will build on a more resilient, sustainable, and decentralised architecture, empower end-users with more control over their data and their digital identity, and enable new social and business models that respect European values. The destination will also spearhead the use of virtual worlds and digital twins where they can make a real difference. Industrial virtual worlds could increase productivity, improve working conditions and access to work, and address and anticipate skills gaps for highly complex products/services or for safety-critical operations. Smart communities and 'citiverses' can empower public authorities and people to fulfil their aspirations. To reach the ambitious goal of achieving trustworthy AI, 'compliant by design' with the AI Act – challenges such as accuracy, robustness, transparency and efficiency have to be addressed, along eliminating biases in data entry to assure fairness in light of individual differences, e.g. in gender or age, and intersectional diversity. Increasing the cognitive level of AI systems (like from combining data-driven and symbolic learning) is crucial for their wider uptake and acceptance. Smart 'technology-for-trust' (e.g. blockchain for identity and transaction tracking, AI to counter biases, deep-fake recognition, fact checking) will also have a role. The Cluster will focus particularly on generative AI (addressing algorithms, data and computational resources), foundational models and language technologies to gain strategic autonomy in this area. This is expected to trigger a whole range of new applications in entertainment, education and commerce, starting with assisted and virtual content production, and on demand synthetic media. Beyond these, the possibilities in industrial settings (e.g. robotics, training, process planning, quality assurance), in public services and public administrations are largely

untapped. Involvement of social sciences and humanities will help bring benefits and respect for European values. Specific measures are needed to allow start-ups and smaller companies to use and benefit from AI, data (including by enabling access to the high-performance computing power needed), photonics and robotics, and to play an active part in developing the next generation of smart technologies within a diverse and open European innovation ecosystem. Similarly, the responsible use of AI in science, research and engineering is going to be key for keeping up the scientific and technological global competitiveness of the EU. These elements will also contribute to the EU's Apply AI Strategy, a comprehensive approach aimed at establishing Europe as a global leader in the development and adoption of AI, by fostering a vibrant AI ecosystem and making Europe a hub for AI innovation and growth, where world-class AI models are developed and integrated into strategic sectors. This initiative is designed to drive innovation, economic growth, and competitiveness, while ensuring that the benefits of AI are shared by all. The topics related to Generative AI included in this destination will support the implementation of the GenAI4EU initiative included in the AI Innovation Package of 24 January 2024, and constitute an integral part of the broader Apply AI strategy, aiming to create a cohesive and coordinated approach to AI development and adoption, one that promotes European excellence and leadership in this critical field. A well-functioning European ecosystem of digital commons, based on open technologies and driven by European values, and a thriving culture of collaboration and social innovation are essential for ensuring sovereignty, trust and user empowerment. New software engineering techniques are needed that are applicable from core to edge and across the entire software stack to build the open distributed systems that the cluster envisages. AI-driven as well as low-code methodologies will help address shortages of digital skills, increase productivity and allow for point-of-use configuration and personalisation.

This destination is structured around the following headings:

Virtual Worlds

The objective of this heading is to gain industrial leadership in Virtual Worlds technology at large (eg. eXtended Reality technologies and immersive environments), while ensuring the European values of privacy, ethics and inclusiveness. It also aims at advancing immersive virtual experiences, supporting a user-centered Web 4.0, and building a sustainable digital ecosystem within Europe. The efforts will notably focus on advancing immersive experiences, enhancing virtual world technologies, and support the launch of the new European Partnership on Virtual Worlds that will drive innovation, access resources, and foster industry collaboration across the virtual worlds' value chain.

AI-GenAI / Data / Robotics

The GenAI4EU HUB aims to build a vibrant European GenAI ecosystem by fostering collaboration, visibility, and innovation across strategic sectors. This initiative supports the European Commission's AI Office in creating a trustworthy AI ecosystem that maximizes societal and economic benefits. It will coordinate efforts among stakeholders—ranging from local GenAI communities and startups to large industries—enhancing the EU's GenAI impact and visibility. Additionally, it will monitor the EU GenAI landscape, assess market needs, and

disseminate findings to foster a cohesive and innovative GenAI environment. The HUB also aligns with European partnerships like ADRA, ensuring integration with existing initiatives and contributing to the EU's leadership in AI and GenAI advancements.

Standardisation and Knowledge Valorisation

Linked to the importance of deploying the results of research and innovation in the Union, in order to achieve economic, environmental and social outcomes, a number of topics in this Work Programme will support essential efforts in knowledge valorisation and standardisation; and in improving access to technology infrastructures.

International Cooperation

The proposed international coordination and support actions are aligned with the Commission's international priorities. They will help build strong international digital partnerships and promote a human-centred digital agenda. International cooperation will further a level playing field and reciprocity while delivering new solutions to digital challenges. Through evidence-based advice and joint actions with leading semiconductor nations like Japan, South Korea, Taiwan, Singapore, the USA, Canada, and India, the aim is to bolster Europe's role in the global semiconductor value chain. This includes guiding the European Commission on research collaborations and policy measures while providing factual insights into emerging technologies and global supply chains. In parallel, proposed actions will focus on strengthening international cooperation in the semiconductor sector and advancing Generative AI (GenAI) initiatives in Africa. The aim would be to empower African societies, particularly rural communities and women, by equipping local technology companies with the tools to leverage GenAI for innovative solutions in key areas, thereby unlocking its potential for social and economic development in Africa.

Virtual Worlds

Proposals are invited against the following topic(s):

**HORIZON-CL4-2025-03-HUMAN-14: Core technologies for virtual worlds (RIA)
(Virtual Worlds and Photonics Partnerships)**

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 and 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 43.00 million.
<i>Type of Action</i>	Research and Innovation Actions

<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3 and achieve TRL 5 by the end of the project – see General Annex B.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio covering the two areas described, grants will be awarded to applications not only in order of ranking but at least also to two proposals that are the highest ranked within each of the two areas described, provided that the applications attain all thresholds.

Expected Outcome: Proposals are expected to contribute to developing core technologies for Virtual Worlds, with a focus on better, more realistic and more performant interaction and immersion, at application and components levels. The following outcomes are expected:

- Area A: Better and more realistic immersion through multimodal interaction. Project results are expected to contribute to the following expected outcome:
 - Improvement of the multimodal immersion experience combining eXtended Reality with advanced and innovative technologies.
- Area B: Innovative photonics technologies for projection, sensing and perception in virtual worlds. Project results are expected to contribute to the following expected outcome:
 - Improved performance of microdisplays or sensing devices serving Virtual Worlds by using innovative Optics and Photonics technologies.

Proposals are expected to focus on either Area A or Area B. The area should be clearly identified within the proposal. Special attention will be given to proposals (whether Area A or Area B) including transdisciplinary research in order to deliver and enhance uptake of suitable, accurate, ethical and safe solutions.

Proposed applications should aim at increasing awareness, acceptance and adoption of virtual worlds applications across sectors.

Scope: Virtual worlds will impact the way people live, work, create and share content, the way public administrations interact with citizens as well as the way businesses operate, innovate, produce and interact with customers.

Multimodal interaction and immersion are key dimensions of Virtual Worlds and will be supported by innovative optics and photonics technologies to achieve the full potential of Virtual Worlds core technologies.

A broader adoption of Virtual Worlds will need better and more realistic immersion and interaction, mixing modalities, sensors and actuators for an ever-improved user experience: touch, smell, haptics, etc will be better stimulated, bringing users closer to real-world sensations, serving Virtual Worlds.

Many challenges remain to be addressed to realize optics and photonics technical solutions that offer high-performance, excellent visual quality, high-quality user experience, and sustainable services and devices, for head-mounted displays (HMD), autostereoscopic displays or sensing devices.

Coupled with display and sensing technologies, algorithms and metrics should be considered to exploit the underlying light (transportation) models given the utilized modality and address e.g. scene representation, content generation, compression, transmission, content reconstruction, content-to-display adaptation, or rendering. Moreover, the quality of integration, both from a user and technological perspective, will be essential for a broad adoption of Virtual Worlds.

The Area A proposals under this topic should develop and demonstrate novel applications for Virtual Worlds that combine several modalities and aim to provide seamless and more realistic immersive interactions. Proposals should investigate novel scientific approaches or push the limit of existing ones to improve the synchronization and integration of the different modalities.

Proposals should focus on an enhanced use of multimodal technologies, integrating at least two modalities within an extended reality application. Modalities include haptics and force-feedback, vision, touch, smell, speech, etc.

The Area B proposals should address the development and integration of advanced innovative and high-performance Optics and Photonics technologies for display and sensing devices serving Virtual Worlds.

- For displays further improve current high-end microdisplays regarding power consumption (<1 mW), device efficiency, resolution (8K and beyond, pixel densities $> 10\text{kppi}$), high dynamic range (HDR), colour gamut, contrast and refresh rate holding the promise for truly immersive experiences;
- For sensing devices improve accuracy in diverse lighting conditions and with different eye physiologies.

Special attention should be given to the design and fabrication of suited waveguide optics, holographic elements, diffractive optics, reflective light guides, freeform optics (including micro-optics), or meta-surfaces with optimal optical properties and behaviour; to support the required field of view (FoV), to be lightweight and safe for the user, and provide excellent colour uniformity and high brightness efficiency; to satisfy the use case requirements for both professional use and mass adoption, i.e., be scalable to large volumes and cost-effective; to integrate targeted systems seamlessly into mixed-reality devices without increasing bulk or reducing comfort.

For both Area A and Area B proposals, the quality of integration, both from a user and technological perspective, will be essential for a broad adoption of Virtual Worlds. The proposals should include a focus on human perception and experience, from subjective, objective, and functional perspectives, and take into account EU values such as inclusivity, privacy, security and safety of users and the protection of their personal data, as well as diversity. Solutions should guarantee the privacy and rights of individuals and companies and ensure secure and trustworthy interactions to deliver and enhance uptake of suitable, accurate, ethical and safe solutions.

The Consortium should pay attention to developing solutions that are reliable, robust and interoperable. Proposals should leverage existing open standards and technologies in the domain of eXtended Reality, while contributing to ongoing standardisation work. Applications should be tested and anchored in real world environments and aimed at least one application domain.

We consider that proposals with an overall duration of typically 36 months would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other durations.

Proposals should involve the effective contribution of Social Sciences and Humanities (SSH) disciplines and SSH experts, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

This topic is implemented through a joint effort from the co-programmed European Partnership for Virtual Worlds and the Photonics Partnership and all proposals are expected to allocate tasks for cohesion activities with both partnerships, including the CSA HORIZON-CL4-2025-03-HUMAN-17: Specific support for the Virtual Worlds Partnership and the Web 4.0 initiative.

HORIZON-CL4-2025-03-HUMAN-15: GenAI4EU: Generative AI for Virtual Worlds: Advanced technologies for better performance and hyper personalised and immersive experience (IA) (AI/Data/Robotics & Virtual Worlds Partnerships)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 and 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Innovation Actions

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway and the following additional associated countries: Canada, Israel, the Republic of Korea, New Zealand, Switzerland, and the United Kingdom.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.²¹⁴</p>
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 4 and achieve TRL 6 by the end of the project – see General Annex B.

Expected Outcome: Project results are expected to contribute to at least one of the following expected outcomes:

- Realistic, creative and innovative characters, user-tailored artefacts, and Virtual Worlds for a better immersion and significantly improved user experience.

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The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

- Smart digital assistants and 3D chatbots for a safe and inclusive navigation.

Scope: Generative AI, at the edge and integrated in devices, will bring better performance, a more personalised and a more immersive experience for an inclusive and wider adoption of Virtual Worlds. Small and frugal AI models would enable faster inference contributing to lower latency while improving security and privacy by processing data closer to the user, preserving EU Values. Smart digital assistants will accompany users throughout their journey within Virtual Worlds, bringing new innovative communication modalities, advancing collaborative intelligence and decision-making AI capabilities.

Innovation actions proposals are expected to address:

Generative AI – Realistic and innovative Virtual Worlds for a better immersion:

Proposals should use Generative AI to build on the users' expectations to create either safe and inclusive virtual spaces, realistic environments, or creative and beyond reality ones. They should develop dynamic Storytelling and scenarios to enable creative content that is personalised leading to unique experiences for the users or shared with other users. They should also use AI to enable generation of personalised avatars aiming to provide seamless and more realistic immersive interaction.

Generative AI – Smart digital assistance for a safe and inclusive navigation in Virtual Worlds:

Proposals should develop smart people-centered and accessible digital assistants and 3D chatbots (AI-enhanced communicating 3D avatars), to for example, enhance training and education, remove language barriers or language disorders through instant translation, including sign languages, remove barriers to persons with disabilities, offer sentiment analysis and behavioural decision support systems, enable users to adapt to various interlocutors from various cultures, languages and backgrounds, contributing to navigate in inclusive and safe Virtual Worlds, while offering users new adapted learning modalities. When relevant, proposals can capitalise on latest developments in generative AI, to bring step change in explainable collaborative intelligence and decision-making capabilities by dedicated specific research.

We consider that proposals with an overall duration of typically 36 months would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other durations.

Proposals should involve the effective contribution of Social Sciences and Humanities (SSH) disciplines and SSH experts, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

This topic is implemented as a joint effort between the co-programmed European Partnership for Virtual Worlds and the co-programmed European Partnership on AI, data and robotics (ADRA), and all proposals are expected to allocate tasks for cohesion activities with both partnerships, including the CSA HORIZON-CL4-2025-03-HUMAN-17: Specific support for

the Virtual Worlds Partnership and the Web 4.0 initiative and the CSA HORIZON-CL4-2025-03-HUMAN-18: GenAI4EU central Hub.

When possible, proposals should build on and reuse public results from relevant previous funded actions. Communicable results should be shared with the European R&D community through the AI-on-demand platform, and if necessary, other relevant digital resource platforms to bolster the European AI, Data, and Robotics ecosystem by disseminating results and best practices.

Proposals should also build on or seek collaboration with existing projects and develop synergies and complementarities with other relevant International, European, national or regional initiatives.

HORIZON-CL4-2025-03-HUMAN-16: Drive the evolution of the internet towards open and interoperable Web 4.0 and Virtual Worlds: building blocks in priority areas (RIA) (Virtual Worlds Partnership)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 14.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Subject to restrictions for the protection of European communication networks.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio covering all the areas described in the scope, grants will be awarded to applications not only in order of ranking but at least also to one application that is the highest ranked within each area, provided that the applications attain all thresholds.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The

	<p>maximum amount to be granted to each third party is EUR 150 000. This is justified by the possibility for a third party to participate in several calls during the full duration of the pilot.</p> <p>A maximum of 15% of the total requested EU contribution may be allocated to financial support to third parties, selected through open calls.</p>
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Expected Outcome: Project results are expected to contribute to the following expected outcomes:

- An early demonstration of the future Web 4.0 architectural framework (including protocols and standards) made up of key Open Source internet building blocks in priority areas: identity, software supply chain, open hardware, decentralised solutions & virtual worlds.
- The emergence of open and interoperable Web 4.0 and Virtual Worlds supported by EU based internet ecosystems centred on EU values and regulatory framework with high socio-economic impact, through the application of digital commons technologies and other Open Source solutions and open standards in several use cases.
- Supporting the transition from today's internet towards Web 4.0 where end-users have access to a more personalised and interactive experience through more collaborative, decentralised and user-centred approaches. Special attention will have to be given to security, scalability, and accessibility issues.
- New business opportunities and the emergence of new business and sustainability models based on Open Source.

Scope: The aim of this topic is to advance the evolution of the internet towards open and interoperable Web 4.0 enabling Virtual Worlds, ensuring seamless user experience navigating across platforms by increasing the take up of digital commons technologies and other Open Source solutions in Europe. The action will thus leverage the strong and active community of European Open Source innovators that can contribute to relevant digital commons to deliver on key features of virtual worlds.

This topic will support early demonstrations for Web 4.0 and its architectural framework, through the use of key building blocks where there is sufficient level of maturity and critical mass of commons contributors (such as in the context of the Next Generation Internet initiative).

The envisaged Web 4.0 shall be powered by open and decentralised technologies enabling interoperability between platforms and networks and freedom of choice for the users. It should be developed through Open Source / digital commons and tackle security, scalability and sustainability at the core of the technological developments.

Applicants should define the mechanisms for contributing to and aligning with the strategic roadmap for research and innovation and the architectural Framework as it becomes available from the specific separate support action HORIZON-CL4-2025-03-HUMAN-17: Specific support for the Virtual Worlds Partnership and the Web 4.0 initiative (CSA).

Applicants should devise appropriate mechanisms for cooperating with the other projects under this action to ensure that they work in a coherent way towards the vision of an open, interoperable Web 4.0

At least one proposal in each of the area defined below will be selected. Proposals should clearly identify the area they are addressing.

Area 1: Identity management

Proposals will support and facilitate the deployment and adoption of the EU Digital Identity Wallet with the testing, community development and packaging of Open Source solutions for the issuance and verification of electronic attestations and the provision of eIDAS trust services. The aim is to deliver a diversity of Open Source digital solutions and services in accordance with the European digital rights and principles, empowering citizens with the freedom of choice from many secure digital identity solutions that are aligned with the EU regulations. Additionally, to foster and support enterprises to harness the benefits of the EUDI wallet and the eIDAS trust services. Examples may include the implementation of EUDI wallets for Open Source operating systems, like Linux (for enterprise servers), cloud-based wallets, laptop-based wallets, Open Source Operating System for mobile devices. Furthermore, technical solutions and services for secure and anonymous digital payments and money transfers between people, solutions for the implementation for attestation issuers and verifiers and the eIDAS trust services with a focus on the development of Open Source stacks for issuers and relying parties (for issuing and verifying electronic attestations), especially as/for cloud services. When relevant, proposals may address the validation of physical documents, either IDs or other types of identity-related documents, such as breeder documents.

Area 2: Software Supply Chain security

Trusted frameworks are essential to keep the software supply chain secure, as demonstrated by the recent attack on XZ Utils. The aim is to strengthen the security of the software supply chain by leveraging related NGI building blocks and package solutions for example for traceability of code, collaborative trust models among contributors and users, detection of anomalous behaviour, construction of software bill of material. Use cases include developers and users of codes, DevSecOps team, corporate IT, Open Source projects, industry and/or parties that need to be compliant with the Cyber Resilience Act.

Area 3: Open Hardware

Open Hardware is key for supporting trust and sovereignty as it allows users to inspect, modify, and implement freely the designs. The aim is to support the uptake of Open Hardware chips and tools through prototyping, productization and integration in real life cases.

Proposals can address several re-usable tools and components such as controllers, processors, or network chips. Use cases include consumer devices for immersive virtual worlds, industry applications, consumer devices, smart cities.

Area 4: Alternative solutions to centralised platforms

As EU legislation places obligations on platforms, particularly focusing on gatekeepers, it is important to prioritize nurturing and enriching credible alternatives. Proposals in this area could cover integrating, testing and operation of Open Source decentralised solutions offering credible alternatives to users supporting the emergence of Web 4.0 and Virtual Worlds experience. Examples include instant messaging, application stores, or productivity groupware that should showcase virtual worlds interoperability, trust, resilience, and scalability. The focus should be made on decentralised and federated solutions based on interoperability requirements and on open standards to ensure to not only meet regulatory demands but also foster a more open, diverse, resilient, and competitive digital ecosystem.

Area 5: Web 4.0 demonstration for Virtual Worlds

Web 4.0 technologies enabling interoperability and transferability across platforms are crucial to ensure various players to contribute to virtual worlds as opposed to a mono-provider environment. This area will make use of existing Open Source building blocks for ensuring trust, interoperation, interconnection, transaction (including tokens), and resource access in Virtual Worlds applications and services. Proposals will aim at integrating the various building blocks, with a special focus on interoperability and will demonstrate seamless interactions (for example when browsing and searching across multiple providers) in one or two selected scenarios.

For all areas, proposals should innovate beyond the state-of-the-art and could include development, integration, testing, deployment, uptake, and operations activities.

Proposals should encourage, when relevant, open access to data, standardisation activities, as well as an IPR regime and sustainability model ensuring lasting impact and reusability of results.

The Commission considers that proposals with an overall duration of typically 24 to 36 months would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other durations.

This topic implements the co-programmed European Partnership on Virtual Worlds.

HORIZON-CL4-2025-03-HUMAN-17: Specific support for the Virtual Worlds Partnership and the Web 4.0 initiative (CSA) (Virtual Worlds Partnership)

Call: DIGITAL - CNECT
Specific conditions

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Subject to restrictions for the protection of European communication networks.

Expected Outcome: The launch of the co-programmed new European Partnership for Virtual Worlds will help develop and promote a thriving industrial and end-user ecosystem in the EU, covering all the aspects of the virtual worlds value chain. It will also actively engage with people and society at large and provide access to a broader range of resources, including funding, expertise and technology.

This CSA should be prepared, managed and coordinated by the key stakeholders in this field. Project results are expected to contribute to the following expected outcomes:

1. The delivery of a Strategic Research and Innovation Agenda (SRIA) for Virtual Worlds in Europe, for useful, open, interoperable, inclusive, sustainable and trustworthy virtual worlds systems and applications, ensuring Virtual worlds reflect EU values and principles.
2. The delivery of a Strategic Research and Innovation Agenda (SRIA) for Web 4.0 in Europe leading to an inclusive, trustworthy, interoperable, and human-centric Web 4.0 leveraging open-source commons building blocks enabling new social and sustainability models that respect European values.
3. Established and running European Virtual Worlds Partnership supporting the European Virtual Worlds and Web 4.0 community.
4. A strong and competitive ecosystem, with European companies playing a leading role in the adoption and acceptance, and in the development and deployment of Virtual Worlds technologies.
5. Reinforced links among initiatives in virtual worlds in Horizon Europe, Digital Europe Programme, and other programmes at EU, national and regional levels.
6. Widespread awareness and outreach programmes

7. Increased adoption of virtual worlds that are open, accessible and inclusive, interdisciplinary, safe and respect ethical values and European legal framework, including regarding privacy, security in all Member States and Associated Countries
8. Standardisation methods for virtual worlds technologies and in support of the EU regulatory framework.

Scope: The selected proposal should provide specific support for the coming European Virtual Worlds Partnership.

The selected proposal should:

- Support to the Virtual Worlds Partnership to develop a strong and inclusive network by strengthening the links and promoting collaboration among academia, industry, public actors and end-users, including the major industrial European sectors and all relevant stakeholders, to guarantee strong coordinated efforts toward trustworthy and human-centric virtual worlds for the economy and society. The network will also include national representatives, to link to national programmes and to foster synergies and coordination between the various European, national, public and private initiatives. Such coordination of efforts in research, innovation and expertise will be important for Europe's leadership in virtual worlds. The objective is to support the community in defining and implementing the Virtual Worlds strategy for research, innovation, and deployment, and support the Partnership in its coordination and support of the community in non-R&D tasks as well.
- Support the development and implementation of a Strategic Research and Innovation Agenda for Virtual Worlds (SRIA).
- Support the development of a Strategic Research and Innovation Agenda (SRIA) for Web 4.0 in Europe and propose an implementation agenda of a European Web 4.0 strategy for research and innovation by defining the trajectories to drive the evolution of the internet towards Web 4.0. This should include the architectural framework (including standards and protocols) and principles, identifying its main building blocks. The implementation strategy should also identify the technology areas where Web 4.0 and Virtual Worlds can benefit from joint developments, reuse of technologies or exchanges.
- Support the emergence of a thriving European ecosystem for Web 4.0 where developers, research teams, industry and startups can boost technological capabilities, accelerate uptake of innovative solutions, and foster a supportive business environment. This community is expected to be involved in the definition of the architectural framework, its main building blocks and the implementation roadmap.
- Support and encourage the adoption of Virtual Worlds in all Member States and Associated Countries, with particular emphasis on geographical aspect and across the value chain.

- Develop and implement outreach programmes aiming at better understanding and awareness of Virtual Worlds including acceptability and trustworthiness, informing about potentialities of Virtual Worlds but also ensuring that public expectations are realistic to avoid backlash in the adoption. Such activities should target in particular the business community, with a particular focus on SMEs, as well as public administrators, citizens and civil society at large.
- Identify ethical, legal, societal and economic aspects of virtual worlds and actions on how to tackle possible issues. Particular attention should be paid to gender, racial, and other biases as well as mitigation measures.
- Support to standardisation in view of boosting virtual worlds industry, creating, and guaranteeing trustworthy and ethical Virtual Worlds, by bringing stakeholders together and, when needed, organise European representation in existing or new standardisation working groups in support of the Commission regulatory framework.

This topic implements the co-programmed European Partnership on Virtual Worlds and the initiative on Web 4.0.

Proposals are encouraged to build on, or seek collaboration with, existing projects and develop synergies and ensure complementarities with other relevant European, national or regional initiatives and funding programmes relevant for Web 4.0 and Virtual Worlds in Horizon Europe, Digital Europe Programme (such as the Common European Data spaces or the Digital Twins) and other programmes (European Innovation Council, Digital Innovation Hubs, European Digital Innovation Hubs, European Digital Infrastructure Consortia, the VR/AR Industrial Coalition, etc). Such synergies and complementarities should be developed through efficient mechanisms (e.g. joint task forces), organisation of joint events gathering projects, etc.

In particular links are encouraged with:

- HORIZON-CL4-2023-HUMAN-01-21: Next Generation eXtended Reality (RIA)
- HORIZON-CL4-2023-HUMAN-01-22: eXtended Reality for Industry 5.0 (IA)
- HORIZON-CL4-2023-HUMAN-01-23: Supporting the emergence of an open human-centric Metaverse (CSA)” In view of sharing knowledge and developing synergies, proposals are also encouraged to coordinate, establish links and ensure complementarities with relevant initiatives in this Work Programme, especially:
- HORIZON-CL4-2025-03-DATA-11: Open Internet Stack: development of technological commons/open-source 3C building blocks (RIA)
- HORIZON-CL4-2025-03-DATA-08: Large-scale pilots for supply end-to-end infrastructures integrating device, network computing and communication capabilities for Telco Edge Cloud deployments, as a basis for Connected Collaborative Computing Networks (3C networks) (RIA)

- HORIZON-CL4-2025-03-HUMAN-14: Core technologies for virtual worlds (RIA) (Virtual Worlds and Photonics Partnerships)
- HORIZON-CL4-2025-03-HUMAN-15: GenAI4EU: Generative AI for Virtual Worlds: Advanced technologies for better performance and hyper personalised and immersive experience (IA) (AI/Data/Robotics & Virtual Worlds Partnerships)
- HORIZON-CL4-2025-03-HUMAN-16: Drive the evolution of the internet towards open and interoperable Web 4.0 and Virtual Worlds: building blocks in priority areas (RIA) (Virtual Worlds Partnership)

Proposals are encouraged also to closely collaborate and build synergies and complementarities with other relevant European Partnerships (such as Data, AI and Robotics; Photonics, the European Blockchain Partnerships); Next Generation Internet (NGI) initiative, the European Flagships (such as Graphene), the EU supported digital twins initiatives (such as Destination Earth).

The Commission considers that proposals with an overall duration of typically 36 months would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other durations.

Proposals should involve the effective contribution of Social Sciences and Humanities (SSH) disciplines and SSH experts, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

All proposals are expected to allocate tasks to cohesion activities with the Partnership on Virtual Worlds and funded actions related to this partnership.

AI-GenAI / Data / Robotics

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-03-HUMAN-18: GenAI4EU central Hub (CSA)
(AI/Data/Robotics Partnership)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway, associated countries and OECD countries.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, shall not participate in the action.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ²¹⁵.</p>

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

- Creation of the GenAI4EU HUB: developing a strong and visible GenAI4EU community, supporting the uptake of European GenAI solutions across strategic application sectors and the HE Clusters, through collaboration and knowledge exchange.
- This CSA will also support and collaborate with the European Commission's AI Office in its function to promote an innovative ecosystem of trustworthy AI, to reap the societal and economic benefits.

Scope: This horizontal Coordination and Support Action for GenAI4EU will develop a strong and visible European GenAI ecosystem of developers and users, aiming to strengthen the

²¹⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

coordination, impact and visibility of the GenAI4EU initiative²¹⁶ across diverse sectors. This CSA should be prepared, managed and coordinated by the key stakeholders in this field, in particular those active in developing local GenAI communities, tech transfer, attracting investment, and making the European GenAI stakeholders visible.

Serving as a hub for collaboration, this project seeks to streamline efforts in developing high-impact GenAI-based applications while fostering cooperation among various GenAI stakeholders, from startups, academia and large user industries, including large IT suppliers and integrators.

It will support all the Horizon Europe Pillar 2 clusters, in addressing their policy needs through the implementation of the GenAI4EU initiative, in particular in supporting mechanisms to pool efficiently and make sufficient data of high quality available (in particular from the European Data Spaces, but exploiting other sources of data as appropriate), and facilitate collaboration with the AI Factories.

The proposed project is expected to involve close collaboration and coordination among the projects implementing GenAI4EU, developing a strong community. It should also help them to maximise their impact and increase their visibility.

It should also foster the uptake in all strategic application sectors, namely the ones addressed in the GenAI4EU initiative, including the 14 industrial ecosystems²¹⁷, in stimulating collaborations between the European developers and users.

The selected proposal will foster collaboration between the AI Factories, the Data Spaces (as well as other data providers) and the SIMPL infrastructure, in establishing mechanisms to make data available in the AI factories, in particular for the training, and possibly fine-tuning of large GenAI models, while respecting IP or privacy/GDPR of the entities/industries providing their data. This should build on relevant initiatives, such as data intermediation services, with a view of using a trusted third party to ensure no exchanges between industry competitors for instance, while defining mechanisms to access (and if needed pooling of) critical amount of data, required for the training of very large models. This will require mobilisation of industries owning large sets of data, defining with them such mechanisms acceptable to all, and implementing them through secure infrastructures, protocols, interoperability mechanisms, within the various projects implementing GenAI4EU in the various clusters.

The proposal will also support Common European Data Spaces to coordinate standard setting approaches for further data sharing and data interoperability among them or with the AI Factories.

²¹⁶ <https://digital-strategy.ec.europa.eu/en/library/communication-boosting-startups-and-innovation-trustworthy-artificial-intelligence>

²¹⁷ The 14 strategic industrial ecosystems identified in the European Industrial strategy (Strategy - European Commission (europa.eu)) are: construction, digital industries, health, agri-food, renewables, energy intensive industries, transport and automotive, electronics, textile, aerospace and defence, cultural and creative culture industries, tourism, proximity and social economy, and retail

The selected proposal will also ensure collaboration between the GenAI4EU projects, and the relevant the AI Factories, for the computing resources, and the data spaces. Moreover, a few specific working groups among stakeholders should be established in key European industrial / application sectors (such as in Robotics / Manufacturing, Automotive, energy, pharmaceuticals, etc.). Their aim will be to bring together key stakeholders of the sector (incl. startups / SMEs and large companies) and foster discussions among them for stimulating their cooperation in developing GenAI models relevant for their sector, but also on how to address access to existing large data sets, incl. their interoperability and use for GenAI models and/or any other elements necessary for enabling an effective development and further grow of the sector's GenAI ecosystem.

The proposal will also ensure connection with the AI on Demand platform providing support for fine-tuning pre-trained models and developing innovative downstream applications, the GenAI4EU Skills, and relevant activities implemented under the EU's Digital Europe Programme, Horizon Europe Programme as well as national activities. The selected proposal is also expected to build on or seek collaboration with existing and upcoming projects and develop synergies and ensure complementarities with other relevant European, national or regional initiatives, funding programmes and platforms.

The CSA is expected to constantly monitor the way the EU GenAI ecosystem, including the AI factories, is developing. More broadly, the selected proposal will act as a global observatory for GenAI conducting a comprehensive landscape analysis of GenAI, including data on market, research, funding, patent and more broadly the state of the advancement of GenAI in the EU and worldwide. This includes an inventory of use cases, capabilities, evaluation tools and methods to assess generative AI models. The selected proposal is expected to widely disseminate this analysis at least twice a year to the stakeholders, including the EU, the Member States and Associated Countries.

It will also assess the uptake of GenAI by large European industry (including technology suppliers and user industry), and mobilise them to engage in GenAI4EU initiatives and drive the future strategy for the development and uptake of GenAI solution “made in Europe” in all strategic industries.

By identifying prioritized sectors and sharing best practices, the project aims to bridge existing gaps, connect stakeholders and foster innovation uptake.

Furthermore, the selected proposal will assess potential areas that require further R&D, including coordination with national initiatives, to ensure comprehensive coverage and collaboration. It will actively engage in networking and community animation to foster knowledge exchange and collaboration among stakeholders.

When possible, proposals should build on and reuse public results from relevant previous funded actions. Communicable results should be shared with the European R&D community through the AI-on-demand platform, and if necessary, other relevant digital resource platforms to bolster the European AI, Data, and Robotics ecosystem by disseminating results and best practices.

This topic implements the co-programmed European Partnership on AI, data and robotics (ADRA) and all proposals are expected to allocate tasks to cohesion activities with ADRA and the funded actions related to this partnership under the call CSA HORIZON-CL4-2021-HUMAN-01-02. This initiative will capitalise on these existing initiatives, complement them and ensure integration within the existing ecosystem developed by ADRA.

Standardisation and Knowledge Valorisation

Proposals are invited against the following topic(s):

HORIZON-CL4-INDUSTRY-2025-01-HUMAN-60: Horizon Standardisation Booster (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²¹⁸.</p>

Expected Outcome: Proposals are expected to contribute to the following outcomes:

- Increased participation of research performers in standardisation activities by establishing a long-term, sustainable link between R&I and standardisation.

²¹⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Increased development and adaptation of standards to meet new industrial needs, particularly in critical technology areas, driven by EU and national research.
- Increased uptake of new technologies through enhanced standardisation activities.

Scope: Standards are crucial in ensuring the safety, functionality, and interoperability of EU products. They help maintain compliance with policy and legal requirements while also enabling access to global markets when they are cutting-edge and established through international organisations. This highlights the important role that standards play in the EU's policy agenda, particularly in initiatives like the Digital Decade, the New Industrial Strategy for Europe, the Commission's EU standardisation strategy²¹⁹, the Communication on Advanced Materials for Industrial Leadership²²⁰ and the Communication on European Economic Security Strategy²²¹. Future Commission actions – whether it is the implementation of legal frameworks like the AI and Data Act or the roll-out of the Commission Recommendation on critical technology areas²²² for the EU's economic security – will depend on standards.

To maximize the impact of R&I, early integration of standardisation, as recommended in the Code of Practice on standardisation²²³, is crucial for aligning innovations with policy goals and enhancing market competitiveness.

This action aims to create a full-fledged standardisation mentoring scheme, by providing expert services to European projects to valorise project results by contributing to the creation or revision of standards. The action should take into account the achievements and lessons learnt of the Horizon Standardisation Booster (HS Booster) pilot, which is running from April 2022 to March 2025. In line with the EU Standardisation Strategy, the HS Booster aims to increase the impact of European standardisation resulting from Horizon 2020 and Horizon Europe projects by designing, launching, and managing a dedicated service for beneficiaries.

To further support the valorisation of project results, the full-fledged Standardisation Booster will assist beneficiaries, primarily, but not exclusively, in the technology domains identified by the Commission Recommendation on critical technology areas²²⁴, whose research results appear to lead to the revision or creation of a standard. This service will involve testing the relevance of their results for standardisation activities.

The premium service concept of the currently running Horizon Booster pilot has a proven track record of providing pertinent support. A similar, high-quality concept is fundamental for a booster successor. It is crucial that such a service increases the number of European standards, compared with the ongoing service scheme. Therefore, the HSbooster.eu platform and tools should be further developed, promoted, and utilised to reach their full potential.

²¹⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022DC0031>

²²⁰ https://research-and-innovation.ec.europa.eu/document/download/0fcf06ea-c242-44a6-b2cb-daed39584996_en?filename=com_2024_98_1_en_act_part1.pdf

²²¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023JC0020&qid=1687525961309>

²²² https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202302113

²²³ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023H0498&qid=1678171117168>

²²⁴ https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202302113

Education and training are prerequisites for a successful and mutually beneficial relationship between R&I and standardisation. A future booster should increase the use of the existing Training Academy, continuously add new elements based on user feedback and data tracking, and be further developed and advertised to enhance usage.

Scaling and full implementation at the member state level are paramount for a booster to create significant and long-term impact. Therefore, besides ongoing and closed Horizon 2020 and Horizon Europe projects, and other EU-funded projects, the Booster will be open to national publicly funded R&I projects. The service will help these beneficiaries engage with standardisation bodies and contribute primarily to the creation of standards through preparation and elaboration of standardisation activities, such as participating in focus groups, setting up new technical committees, drafting technical specifications or technical reports.

Applicants can vary widely, including standard development organisations, research and technology organisations (RTOs), universities, private companies, SMEs, industrial partners, innovation agencies and national metrology institutes. The project may benefit from being addressed by a consortium that is formed by experts in standardisation, able to support Horizon 2020 and Horizon Europe, and other publicly funded project beneficiaries.

HORIZON-CL4-INDUSTRY-2025-01-HUMAN-61: Standardisation landscape analyses tool (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²²⁵.</p>

²²⁵ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link:

Expected Outcome:

- Provide an information tool on the standardisation landscape accessible for all actors of the R&I ecosystem which includes a search instrument for standardisation deliverables at national, European and international level;
- Improve valorisation mechanisms for ensuring the market relevance and scalability of R&I results.

Scope: Standards play a pivotal strategic role, serving as the silent foundation of our Single Market, ensuring a high-level of safety, functionality and inter-operability for EU products. They guarantee adherence to policy and legal objectives. At the same time, standards can facilitate access to global markets when they are state-of-the-art and developed within international organisations. This underscores the significant role of standards on the EU policy agenda, including initiatives such as the European Green Deal, Digital Decade, New Industrial Strategy for Europe, the Commission's EU standardisation strategy²²⁶, and the Communication European Economic Security Strategy²²⁷. Future Commission actions – whether it is the implementation of legal frameworks, like the AI and Data Act or the roll-out of the Commission Recommendation on critical technology areas for the EU's economic security – will depend on standards.

To support the valorisation of research and innovation results, it is essential to ensure that investments in R&I fully leverage the substantial benefits of standardisation for policy and legal objectives. In line with the Commission Recommendation on a Code of Practice on standardisation²²⁸, structured information on the existing standardisation landscape should be accessible for R&I actors. This is crucial as available information is fragmented, standardisation processes are often uncoordinated, and financial impacts are insufficiently understood.

Furthermore, the diverse array of standard development organisations contributes to a varied landscape, each with distinct procedures, priorities, and stakeholders. This decentralised approach often results in duplicated efforts, and difficulties in navigating the plethora of available standards. Moreover, the absence of a centralised database or repository makes it challenging for researchers to access relevant standards efficiently, hindering their ability to incorporate standardisation into their research and innovation endeavours effectively.

The overarching objective of the action is to develop a landscape analyses tool supporting all actors in the R&I ecosystem in identifying relevant existing standards. This will enable R&I actors to consider the existing standards landscape as a key state-of-the-art input when planning their R&I project activities, thereby avoiding reinventing the wheel. The tool to be developed shall include mechanisms to keep the standards up-to-date automatically as far as

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²²⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022DC0031>

²²⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023JC0020&qid=1687525961309>

²²⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023H0498&qid=1678171117168>

possible. In addition, state of the art standards give new impetus for technological developments and help R&I actors comply with existing regulatory frameworks. Efforts should be made to develop standards that align with international and European standards, as well as with industrial and commerce consortia, to reduce the number of standards and have a broader acceptance.

In order to develop such a comprehensive open-access information tool effectively benefitting a variety of R&I actors, the project should be carried out by experts representing different stakeholders covering industry, academia and standard development organisations.

HORIZON-CL4-INDUSTRY-2025-01-HUMAN-62: Artificial Intelligence for knowledge valorisation (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²²⁹.</p>

Expected Outcome: Proposals are expected to contribute to the following outcomes:

- Swiftly valorise research results by market, society or policy making, powered by AI;
- Tackle the innovation paradox in Europe, by supporting R&I actors to valorise their research through relevant AI tools;

²²⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Use AI to deliver valorisation roadmaps, business plans, partnerships and guide market uptake strategies in at least 100 use cases of research-based innovative solutions addressing societal challenges.

Scope: Artificial intelligence and machine learning present enormous opportunities to use scientific knowledge and research results faster and more effectively to create value, develop new products and services and address the needs of our societies. Despite leading in many fields of scientific research, Europe falls short in innovation and valorisation performance (what is known as “the innovation paradox”). Harnessing the power of AI to guide the efforts of researchers and innovators to bring results to the market, make their research more responsive to the needs of society and provide knowledge to inform public policies, can significantly contribute to addressing the innovation paradox. From results scouting to patent drafting, the role of AI to support knowledge valorisation presents ever-growing possibilities.

One of the main reasons hampering valorisation of the knowledge generated by R&I actors in Europe is that researchers and innovators are not always aware of the valorisation opportunities of their research results and may struggle to adopt a concrete plan on how to generate value from their research.

This topic aims to support R&I actors to use AI to support the uptake of research results by market and society. This entails the identification of appropriate existing tools and instruments and the testing of AI -powered valorisation plans in at least 100 cases.

The action will provide an AI -powered valorisation toolbox, which will take into account EU policy and regulations on AI-ethics, as well as social sciences and humanities aspects, and can be used by researchers and innovators to identify the opportunities for valorisation as well as for guiding them towards market and societal uptake. This may include using AI for assessing feasibility under conditions, investigating legal frameworks that may be relevant to the uptake of the solutions, providing guidance on supporting instruments and funding mechanisms, supporting matching with investors, providing knowledge on the sector, investigating institutional and cultural aspects, citizens and consumer preferences. The use of AI may also focus on the efficient use of intellectual assets to raise awareness and guide R&I actors for the smart management of intellectual assets.

The action will also support multistakeholder collaboration for valorisation, by identifying and promoting dynamic stakeholder interaction opportunities to optimise outreach and engagement, e.g. by engaging SMEs, social enterprises, NGOs and local communities. Drawing of the testing of at least 100 cases of AI- powered valorisation from research results to the market, the action will also develop a knowledge base for insights and best practices, principles and guidance to ensure a responsible use of AI for knowledge valorisation benefiting society.

HORIZON-CL4-INDUSTRY-2025-01-HUMAN-63: Value creation pilots for scaling up innovative solutions (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²³⁰.</p>

Expected Outcome: Proposals are expected to contribute to the following outcomes:

- Increase innovation capacity by drawing on transdisciplinary research and cross-sectoral collaboration to generate economic and societal value;
- Promote the twin transitions, by testing and preparing for scale up at least 10 valorisation pilots, combining research results in a transdisciplinary mode, building multistakeholder collaborations, promoting industry- academia co-creation and engaging with citizens for swifter and human-centric valorisation;
- Enabling more value creation to be retained in Europe, by testing research-based solutions with high potential for scale up.

Scope: Knowledge valorisation is crucial for boosting the Union's industrial competitiveness internationally, strengthening its resilience and fostering its open strategic autonomy. Effective knowledge valorisation enables the Union to create and retain economic and societal value by turning research results to new innovative solutions, benefiting society and creating prosperity for all.

²³⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

The aim of this topic is to strengthen EU capacity to respond to complex and urgent challenges through research and innovation, increase industrial and economic competitiveness and make transdisciplinary research deliver for society. This entails testing the effectiveness of at least 10 transdisciplinary valorisation pilots to “be ready” for scale up across Europe.

The trans-disciplinary and cross-sectoral scale-up pilots will use mature results from research and innovation while simultaneously unlocking untapped value-creation opportunities and promoting collaboration of many different stakeholders from the early stages. Competition among the 10 pilots may be promoted to enhance their quality and help identify the highest potential impact to the Union’s industrial competitiveness, for example through a voting - based mechanism. In the preparatory to the potential scale-up phase, the pilots will also provide new insights to the possibilities and challenges of transdisciplinary approaches to address complex challenges and to the skills, resources and tools needed. Within the scope of the topic are also targeted trainings for cross-disciplinary projects with scale-up potential, as well as other methodological tools and guidelines. This may also include best practices in harnessing the power of cross-disciplinary and cross-sectoral collaboration to enhance capacity, drive innovation, and unlock new opportunities for value creation across industry, academia, and the public sector.

HORIZON-CL4-INDUSTRY-2025-01-HUMAN-64: Pilot initiatives on Technology Infrastructures (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 0.50 and 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²³¹.</p>

²³¹ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link:

Expected Outcome: The projects funded under this topic will have the following expected outcomes:

- Provide evidence and understanding of the European landscape of Technology Infrastructures, including existing facilities and their services;
- Develop a sound understanding of the specific needs of industrial users for Technology Infrastructures;
- Improve availability of Technology Infrastructures facilities and strengthen the provision of services for enterprises across the EU, in particular SMEs and start-ups, with increased opportunities for testing, up-scaling and deployment of new technologies;
- Make Technology Infrastructures in Europe stronger and more resilient with improved, strategic service offer, better adapted to user needs;
- Strengthen the innovation and technology development capacity of the European industry;
- Contribute to the validation of a European approach to Technology Infrastructures, test different strategies and instruments, and their feasibility, to address availability and service gaps at EU level, as well as learn from their implementation experience.

Scope: Proposals should identify a specific technology area or industrial ecosystem in which they will implement the activities proposed for a pilot initiative. This should take into account the selection criteria for pilot actions developed in the final report of the Commission Expert Group on Technology Infrastructures²³² and could cover the priority areas proposed in this report.

The proposals should cover different strategic steps needed to lead to and achieve the expected outcomes, depending on the starting point for the proposed area, building on earlier analysis and consultations.²³³

The proposed actions should lead to a comprehensive understanding of the landscape of Technology Infrastructures, provide evidence of their benefits and added value in the area covered by the proposal, and of any specific needs to improve their availability, accessibility and impact. The actions should also identify possible barriers to addressing the identified needs.

The activities should in particular build on or carry out a detailed mapping of the available Technology Infrastructures in Europe in the pilot area covered by the proposal, and the analysis of main types of services offered and used. The actions should result in an in-depth

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²³² Link to the report of the Commission Expert Group on Technology Infrastructures will be provided in due time.

²³³ See the report from the above-mentioned Expert Group.

understanding of user needs for Technology Infrastructures in relevant industrial ecosystems as well as identify the potential gaps in Technology Infrastructures services or mismatch between supply and demand, both in terms of the types of facilities and services offered and their availability across the entire EU. This analysis should consider both the current state of play and a forward-looking perspective, as well as needs of large companies, SMEs and start-ups.

The proposed actions should include development of a strategy, roadmap or agenda with identified measures that would help overcome the existing gaps and barriers. In particular, the actions should identify measures needed to improve infrastructures service provision to industry, including their outreach strategies and pricing policies, facilitate access to these services and increase their visibility, especially across regions and countries, as well as identify potential investment priorities.

Such a strategy could include for example the specifications for new or upgrade of existing TIs, development and deployment of new TI services, developing EU-level networks or ecosystems of TIs with integrated service offers, including both technology and non-technology services (e.g. technical assistance and training services for companies in the technologies and services offered by the TIs, support to standardisation, financing, market analysis or addressing regulatory issues).

The pilot projects should develop proposals for implementation modalities of the proposed strategy, roadmap or agenda, including the part of the infrastructure operators/owners as well as suggested actions and/or support measures at the EU, national, regional level, potentially leading to the establishment of an appropriate coordination mechanism. As a basis, a mapping of already available support measures at EU and national/regional levels should be carried out, as well as identification of relevant actors needed to implement the strategy, roadmap or agenda, and the necessary financial resources, as relevant.

Successful proposals will demonstrate the relevance of the technology areas or industrial ecosystems they choose to cover for EU competitiveness and strategic autonomy as well as the need for action in these areas. They will involve all relevant stakeholders including in particular industrial partners, including SMEs and large enterprises, organisations hosting Technology Infrastructures and other infrastructures offering relevant services for industry, as well as technology, market and legal experts as needed.

Projects should build on or seek collaboration with relevant existing projects and develop synergies with other relevant European, national or regional initiatives, funding programmes and platforms.

HORIZON-CL4-INDUSTRY-2025-01-HUMAN-65: System innovation experimentation for Industry 5.0 (IA)

Call: INDUSTRY

Specific conditions

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²³⁴.</p>

Expected Outcome: Proposals are expected to contribute to the following outcomes:

- Demonstrated successful incentives for systemic transformation towards Industry 5.0²³⁵ and for skills upgrading and boosting the competitiveness of EU industries.
- Development and application of Industry 5.0 enabling conditions, processes and methods for systemic transformation, organisational learning capacities and revitalisation of industries at regional/local level.
- Demonstrate / provide evidence on the implementation of Industry 5.0 innovations for better adaptation of industries to new challenges linked to twin transition (enhanced resilience), organisational agility, and contribute to tackling the skills gap / attraction of best talent in regional industrial ecosystems

Scope: Industry 5.0 is a framework grounded in system thinking approach which aims to bolster the economic and environmental resilience of industrial ecosystems and companies and contribute to enhancing the sustainable competitiveness of EU industries.²³⁶ Industry 5.0

²³⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²³⁵ [Industry 5.0 - European Commission \(europa.eu\)](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf)

²³⁶ European Commission, Directorate-General for Research and Innovation, Renda, A., Schwaag Serger, S., Tataj, D. et al., Industry 5.0, a transformative vision for Europe – Governing systemic transformations towards a sustainable industry, Publications Office of the European Union, 2021, <https://data.europa.eu/doi/10.2777/17322>

innovations such as human-centric technologies or learning organisation models contribute to tackling the new emerging challenges linked to ongoing green and digital transition such as addressing the skills gap, attracting the best talent or accelerating uptake of clean technologies.²³⁷

Proposals should elaborate on an Industry 5.0-driven methodology framework via system innovation experimentation in different industrial ecosystems in European Regional Innovation Valleys and other regions, to support deployment of Industry 5.0 innovations or methods at regional / local industrial ecosystems level:

- a) offer innovative approaches to accelerate industrial transformation at regional/local level while tackling the new emerging challenges such as skills gap or attracting the best talent.
- b) experiment to develop incentives towards longer-term industry 5.0 transformation.

The project should build on the results of the “Community of Practice on Industry 5.0”²³⁸ and other Horizon Europe Industry 5.0 (or related) funded projects. Proposals should involve appropriate expertise in Social Sciences and Humanities (SSH), in particular in systems thinking or complexity science and their practical implementation as part of system innovation or transformation initiatives.

The proposal should include details on processes to identify a concrete long-term transformative innovation challenge for the industrial ecosystems or actors participating, to formulate concrete objectives addressing systemic issues related to how the industrial ecosystem could boost its future competitiveness, and achieve Industry 5.0 goals, and in particular focused on attracting skilled employees, creating the conditions for learning ecosystems or learning organisations. The challenge should guide the next steps on industrial transformation processes and experimentation.

For each of the identified transformation challenge, the project should engage stakeholders in transdisciplinary research and innovation activities, including in:

- a) Identifying and testing new Industry 5.0 driven methods and measures for organisational transformation, learning organisation implementation and system innovation, to support the scaling up of Industry 5.0 and skills for competitive and future-oriented industry transformation:
 - Identifying the package of systemic innovations available to reach the set goals, including advanced technologies designed with responsible practices (human-centric, ecological, bio-inspired, biomimicry, nature-based solutions etc.), business models, new work processes, organisational models, governance or social innovations that can support Industry 5.0 transformation.

²³⁷ European Commission: Directorate-General for Research and Innovation, *ERA industrial technologies roadmap on human-centric research and innovation for the manufacturing sector*, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2777/0266>

²³⁸

- Assessing skills needs and learning areas for the workforce and organisations in the industrial innovation ecosystem, in view of the identified systemic innovations.
- Identifying the incentives, leverage points and / or behavioural aspects that would support the organisations' evolution to industry 5.0, building on existing results of Industry 5.0 funded projects and connected initiatives.
- Identifying successful methodologies to develop systemic innovation incentives to promote Industry 5.0 paradigm change, human-centric enabling technologies, learning organisation model adoption and skills upgrade for Industry 5.0 goals.

b) Developing and testing the new methodologies through sandboxes, open innovation approaches or participatory processes for systemic transformation by prototyping new incentives schemes or enabling measures. The sandboxes should involve quadruple or quintuple helix stakeholders at regional/local level to support the achievement of the identified transformational challenge and contribute to acceleration of place-based industrial transformation:

c) Develop tools/measures to build evidence on and promote the impact of Industry 5.0 methods for industrial transformation at regional/local level, such as:

- Digital or AI-enabled tools to support rapid conversion and orchestration of information that can support decision-making and anticipation of the pipelines of innovations, value chain evolution, skills needs or transformation opportunities.
- Peer learning across the supported ecosystems, focused on the improvement of organisational learning capacity, learning ecosystems development and new innovation capacity for Industry 5.0 transformation, inspired by new paradigms in organisational design, learning and innovation. This should also include actions catalysing leadership for Industry 5.0 paradigm change. Document the results to inform and advise policy-makers in view of their potential upscaling.

Proposals submitted under this topic should include an exploitation strategy.

The project should build on or seek collaboration with existing projects developing Industry 5.0 solutions and/complementary to Industry 5.0 pillars and methods such as Regional Innovation Valleys or New European Bauhaus. It should also develop synergies and ensure complementarities with other relevant European, national or regional initiatives, funding programmes and platforms, such as Digital Innovation Hubs, European Partnerships like Made in Europe, Process4Planet, AI, Data and Robotics Partnership and the relevant EIT KICs.

The Commission considers that proposals in this topic with an overall duration of typically 36 months would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other durations.

HORIZON-CL4-INDUSTRY-2025-01-HUMAN-66: Assessment of Technology Infrastructure needs in Ukraine (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 1.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²³⁹.</p>

Expected Outcome: The project funded under this topic will have the following expected outcomes:

- A comprehensive understanding of the existing landscape of Technology Infrastructures²⁴⁰ in Ukraine, including existing facilities and their services;
- Assessment of the loss of capacities in Technology Infrastructures in Ukraine in result of the Russian aggression;
- A sound understanding of the specific needs of industrial users, including large companies and SMEs, for Technology Infrastructures in Ukraine;
- An investment agenda for Technology Infrastructures in Ukraine addressing the gaps related to the capacity loss due to war and in view of the future technology development capacity of the Ukrainian industry in support of the reconstruction process.
- Identification of Technology Centres in Ukraine that could pilot an integrated approach to the provision of Technology Infrastructure facilities and services Ukrainian companies

²³⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁴⁰ Add the definition of TIs prior to the final version.

to strengthen the connection between research and industry through technology transfer, lowering the risks for private R&I investments.

Scope: Proposals should put forward a robust methodology to comprehensively analyse the current landscape of Technology Infrastructures facilities and services available in Ukraine and assess the damages to such capacities in result of the war. To this end, the proposed activities should engage with Ukrainian authorities at national and regional level as well as relevant organisations within the R&I ecosystems, such as RTOs, technical universities, research institutes and technology centres, hosting such infrastructures.

Activities proposed under this action should include a comprehensive analysis of user needs for Technology Infrastructures, both in the public and the private sector. This analysis should take into account in particular strategic technologies and long-term development needs of the Ukrainian economy.

This should lead to an analysis of capacity gaps and the mismatch between supply and demand for Technology Infrastructure facilities and services.

Building on these analyses, the project funded under this action will develop an investment agenda for Technology Infrastructures in Ukraine in view of the post-war reconstruction of the country. This agenda should identify priority areas for investments as well as the type of investments that are most urgently needed to foster the innovation capacity of the Ukrainian economy. It could also propose specific large-scale investments in individual facilities, development and deployment of new TI services, developing national networks or ecosystems of TIs with integrated service offers, building partnerships with TIs operating in the EU, as well as other actions strengthening the provision of TI services in Ukraine.

The action funded under this call should identify a set of Technology Centres in Ukraine that would pilot the establishment of an integrated network providing Technology Infrastructure services in selected technology area or industrial ecosystem. Such a network should include a critical mass of RTOs, universities and research institutes, as well as the private sector as relevant, that would develop a joint offer of research and technology services and other business support services to Ukrainian companies. Based on this pilot, the project should also develop a strategy and action plan of scaling-up such networks on regional, national and international levels.

Methodologies proposed under the activities envisaged in this action should take into account the relevant work carried out at EU level as well as build on the experience of EU organisations hosting such facilities. Proposals should ensure strong engagement from all relevant stakeholders in the public and the private sector.

Projects should build on or seek collaboration with relevant existing projects and develop synergies with other relevant national, European or international initiatives on Technology Infrastructures, such as for example Open Innovation Test Beds, Testing and Experimentation Facilities or European Digital Innovation Hubs.

International Cooperation

Proposals are invited against the following topic(s):

HORIZON-CL4-2025-03-HUMAN-19: International cooperation in semiconductors (CSA)

Call: DIGITAL - CNECT	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Subject to restrictions for the protection of European communication networks.

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

- Evidence-based advice to the Commission and the Member States on joint actions with leading semiconductor countries (including Japan, South Korea, Taiwan, Singapore, USA, Canada, and India) in support of EU policies.
- Support to the Commission to define and implement measures aiming at strengthening the position of Europe's industry in the global semiconductor value chain.
- Support to the Commission in implementing actions related to research cooperation, e.g. within the Digital Partnerships.
- Factual elements (e.g. mapping supply chains in leading countries, analyses of state-of-the-art, emerging technologies...) that help the Commission in assessing potential areas of cooperation.

Scope: Within the context of semiconductor and semiconductor-based photonics (e.g. silicon photonics), the CSA will support the Commission and the Member States in the following activities:

- Preparation of a regional mapping of leading semiconductor countries outside of the EU regarding supply chains, industrial strengths, gaps and their expected evolution;

- Identification of emerging opportunities (e.g. technologies, approaches) for cooperation with other regions;
- Definition of research areas in which international cooperation would result in tangible benefits for Europe;
- Analysis of risks to the EU's technological advancements, technological competitiveness, and access to leading-edge technology vis-à-vis international cooperation countries;
- Analysis of risks related to EU economic security in the semiconductor area including due to potential over-capacities for production of mainstream chips²⁴¹, export controls and non-market policies and practices.
- Promotion and contribution to standardisation activities;
- Organisation of joint events contributing to the above outcomes;
- Promotion of mobility of researchers in specific topics (in cooperation with other support schemes);
- Preparation of a comparative analysis of modalities for cooperation and their applicability.

The Commission will actively engage with Member States via the European Semiconductor Board ensuring that their interests and views are taken into account.

Projects are expected to ensure complementarities with projects funded under the following topics:

- HORIZON-CL4-2022-DIGITAL-EMERGING-01-38: International cooperation in semiconductors (CSA)
- Chips Diplomacy Support Initiative - EU action grant in the field of pilot projects and preparatory actions²⁴²
- Chips Joint Undertaking's HORIZON-Chips-2024-3-RIA: Joint call with Korea on Heterogeneous integration and neuromorphic computing technologies for future semiconductor components and systems

And to develop synergies with projects funded under the Digital Europe Programme (DEP).

HORIZON-CL4-2025-04-HUMAN-08: GenAI for Africa

Call: DIGITAL - HADEA

²⁴¹ Mainstream chips denote semiconductor devices manufactured at node sizes equal or greater than 28 nm.

²⁴² See Chips Diplomacy Support Initiative | Shaping Europe's digital future (europa.eu)

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 4 and achieve TRL 6 by the end of the project – see General Annex B.

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

- African societies benefit from innovative solutions on GenAI applied to key areas:
- Local technological companies in some locations in Africa benefit from the technological capacity to develop targeted solutions to unlock the full potential of GenAI Digital in key areas with the primary focus on rural communities in Africa and women, being an underrepresented group but with a key role in the foundation of these societies.

Scope: Generative AI (GenAI) holds the potential of creating in Africa a rich ecosystem of transformative solutions and practical applications addressing the specific societal challenges and opportunities most of the countries are facing.

The proposals should address one or more of the following:

- **Agriculture optimisation:** GenAI can analyse satellite imagery and sensor data to monitor state of crops, soil conditions, and weather patterns, enabling farmers to boost crop yields and enhance food security through sophisticated predictive analytics and efficient resource management like water and pesticides. This is crucial to mitigate climate change and poor irrigation infrastructures in some areas of Africa.
- **Healthcare:** GenAI can diagnose diseases from medical images and patient data, enhancing healthcare in remote areas; forecast disease outbreaks and aid in preventive planning, and with the help of chatbots and virtual assistants can offer medical advice and connect patients with doctors, expanding telemedicine services, making healthcare more accessible to remote populations. Particular attention should be paid to the gender dimension in addressing AI biases, sex-specific healthcare needs, and intersecting gender and racial inequalities in health and access to health services.
- **Infrastructure and urban planning:** GenAI optimises energy usage, integrates renewables, and ensures efficient distribution, while managing water (including groundwater but also rainfall use) and waste (e.g. plastic reduction and reuse) effectively for sustainability,

and enhancing safety with real-time incident detection. It also provides support for reconstruction following natural or human-made disasters. This is vital for some African communities with scarce natural resources like water and facing high temperatures by using Digital Twins on urban and rural areas. All these technological solutions depend strongly on the existence and quality of connectivity infrastructure, as a key enabler for unlocking the Digital and Green Transition.

- **Digital Skills and learning:** Generative AI can personalize learning paths, create multilingual educational content, and offer on-demand virtual tutoring, benefiting rural communities with low resources and fully relying on mobile phones to access online services. Additionally, adaptive learning platforms can use data analytics to tailor teaching, while engineers craft queries to help AI models understand local languages and nuances to set up conversational chatbots for local communities.

The proposals should approach these objectives by:

- Conducting an evidence-based analysis to identify particular needs in Africa that GenAI technologies could solve, for one or several of the topics mentioned above.
- Identifying solutions on GenAI developed in the EU that could be applied in Africa for one or several of the topics mentioned above.
- Based on existing EU-based solutions and particular needs, developing and integrating generative Artificial Intelligence models and algorithms specifically adapted for one or several of the abovementioned key areas.
- Involving and supporting start-ups and local networks in 3 to 5 locations in Africa to create innovative solutions to uniquely African challenges in those areas based on GenAI. Co-creation and living lab methodologies should be explored to boost social uptake of proposed solutions. Living labs are ecosystems of experimentation and open innovation, with a systematic approach to co-creation among their users, whether they are researchers, businesses, civil society or public administrations. These open innovation spaces will enable researchers and local actors from the public and private sectors work together using digital technologies to co-create knowledge and solutions that respond to their societal needs, while improving territorial cohesion.
- The approved projects should take into account the AI Act and GDPR as the main legal frameworks to ensure data protection of the data used within third countries.

Where relevant proposals are encouraged to build on, or seek collaboration with, existing projects and develop synergies with other relevant European initiatives. In particular links are encouraged with the projects funded under international cooperation on AI for public good, in the areas of health, digital twin for reconstruction, emergency response and electric grid optimisation, Destination Earth, Copernicus.

Other actions not subject to calls for proposals

Public procurements

1. Heading 5 of Space - Using Space on Earth – Satellite navigation - EGNSS Evolution Mission and Service-related R&D activities

The objective is to study potential new user needs, as well as the resulting enhancement of services, and determine whether and how the EGNSS programmes Galileo and EGNOS shall evolve to answer these new user needs. This includes the preparation of contributions and technical analysis supporting the EU position in multilateral and bilateral working groups and meetings. The upstream R&D actions in this area will cover the assessment of new mission concepts and of services improvements and of new services or capacities to be introduced based on the user needs, developing the service concept including with international partners when relevant, assessing costs to the programme versus benefits to users and defining the roadmap of activities until an operational service could be provided.

Some procurement actions under this section will affect the essential security interests of the Union. In accordance with Art. 136 of the EU Financial Regulation, restricted participation will therefore be established in the tender specifications on a case-by-case basis.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 2.00 million from the 2025 budget

2. Heading 10 of Space - Boosting Space through training and education activities

The objective is to conduct public procurement activities for the implementation of training and education actions in support of upskilling and reskilling efforts pursued by the European Space Policy, European R&I research agendas related to Horizon Europe.

Support will be given to the successful tenderer for the implementation of the following actions, already developed in a pilot phase in the years 2024 – 2025:

- CASSINI Job Placement Scheme: targeting university students and young graduates, to give them an opportunity to gain hands-on experience through internships in space companies. This action aims to connect academia with industry, in particular new space companies, by providing students and young graduates with practical experience on top of the theoretical knowledge acquired at university. This will help students access the job market. At the same time, it will help industry identify and train prospective future staff. The action shall build on the pilot edition developed in the frame of the STARS*EU project featuring the Space Career Launchpad platform and a voucher scheme for paid internships.

- **CASSINI Space Camp:** targeting students aged 14-18. It is aimed to spark the interest of teenagers to pursue a vocation in space, with a particular focus on New Space. This action will build on a pilot activity to be developed throughout 2024 and 2025. Following the model of Cassini Hackathons, it foresees the involvement of local organisers that will implement each space camp locally in the local language where the space camp takes place. The added value in relying on local organisers is their connection with the local ecosystem and local stakeholders (e.g. schools, universities, companies, museums, planetarium, observatory, etc.) that would facilitate the promotion of the programme as well as the rolling out of the various activities.

In addition, the action will cover the continuation of the EU Space Academy Learning Platform offering space entrepreneurs and enthusiasts a free and customizable online development programme offering online lectures, individual mentoring and thematic workshops.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 5.00 million from the 2025 budget

3. Heading 12 of Space - Boosting Space via support to entrepreneurship – 2025 CASSINI activities

Business development, acceleration and upscaling of start-ups will be fostered across all space areas under the CASSINI Space Entrepreneurship Initiative. CASSINI will provide support to business and innovation-friendly ecosystems, including the strengthening of business skills in the space market segments and digital services based on space data. The objective is to make start-ups and scale-ups investment-ready and able to secure venture capital funding. Synergies with the InvestEU programme and the Space programme will be established. The following two actions will be funded:

- CASSINI innovation support.
- CASSINI Business Accelerator.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 8.50 million from the 2025 budget

4. Digital conferences, outreach, studies and other activities

In addition to calls for proposals, other actions are also expected to be undertaken on specific activities that DG CONNECT will support. These include:

- Other events and publications (e.g. information, communication, dissemination etc.), either through the use of existing Framework Contracts, or the launch of indicatively 25 calls for tenders during 2025. Indicative budget in 2025: EUR 1.5 million.
- Studies including socio-economic and impact analysis studies, and studies to support the monitoring, evaluation and strategy definition for the ICT priority of Cluster 4 in Horizon Europe. DG CONNECT plans to procure via framework contracts and calls for tender. The calls for tenders are expected to be launched in the 2nd and 3rd calendar quarter of 2025. It should be noted that internal outsourcing of studies to other Commission departments based on Administrative Agreements can be used as an alternative to public procurement.
- Policy support activities, including benchmarking activities, evaluation and impact assessments, the development of ad hoc support software, possibly using existing Framework Contracts. DG CONNECT plans to procure via framework contracts and calls for tender. The calls for tenders are expected to be launched in the 2nd and 3rd calendar quarter of 2025. It should be noted that internal outsourcing of studies to other Commission departments based on Administrative Agreements can be used as an alternative to the public procurement.

Indicative budget for Studies and Policy support in 2025: EUR 2.5 million.

Details will be provided in the texts of these calls for tender.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Second quarter of 2025

Indicative budget: EUR 4.00 million from the 2025 budget

5. Conferences, outreach, studies and other activities on AI in Science

The adoption of Artificial intelligence technology and related tools in research and innovation has a tremendous potential to accelerate the discovery process, increase scientific productivity, as well as fast-track innovation processes to have a huge contribution to solving societal challenges. Further understanding and monitoring the impact of AI in R&I is needed. At the same time, it is also important to gauge the potential impact on the research and innovation ecosystems. Other actions are expected to be undertaken on the impact of Artificial Intelligence in R&I. These may include:

- Events and publications (e.g. information, communication, dissemination etc.)
- Studies including socio-economic and impact analysis studies
- Policy support activities, including benchmarking activities, evaluation and impact assessments

Details will be provided in the texts of these calls for tender.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 0.35 million from the 2025 budget

6. Conferences, outreach, studies and other activities on Industry 5.0

Industry 5.0 is a new paradigm promoting a path towards human-centric, resilient and sustainable industry. Active stakeholder engagement and co-creation activities are needed, in order to scale-up the adoption of new practices for Industry 5.0; raise awareness and further develop the concept; support new business models driven by Industry 5.0; and monitor the impact of Industry 5.0 impact on productivity and competitiveness, based on net measures such as net domestic product.

Actions to be undertaken on Industry 5.0 may include:

- Events and publications (e.g. information, communication, dissemination etc.)
- Studies including socio-economic and impact analysis studies - on measures of productivity and competitiveness, based on net measures such as net domestic product.
- Policy support activities, including benchmarking activities, evaluation and impact assessments, taking into account new metrics going Beyond GDP.

Details will be provided in the texts of the calls for tender.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 0.60 million from the 2025 budget

7. Space Events, Studies and Platforms

In addition to calls for proposals and delegated actions, events, studies and online platforms are needed on specific activities in order to assemble, maintain and evolve the EU Space R&I ecosystem. These include:

- Events and publications (e.g. information, communication, dissemination etc.).
- Studies including trends, market and impact analysis.
- Online platforms gathering activities of the EU Space ecosystem, supporting networking, exchange of best practices, analysis for policy-making, etc.

These activities will be carried out either through the use of existing Framework Contracts, or the launch of open tenders. Details will be provided in the texts of those tenders.

Indicative budget in 2025: EUR 0.8 million.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 0.80 million from the 2025 budget

8. Conferences, outreach, studies and other activities on industrial R&I support policies

For the EU to reach the target of investing 3% of GDP in R&D, a significant increase of investments in the private sector is necessary. This requires a better understanding and integration of existing policy tools at European, national and regional levels, showcasing good practices in their application. Recognising the existing gaps, targeted policy measures need to be further developed to support and promote industrial R&I as well as strengthen technology development capacities and support services which are essential for an effective transformation of our industry towards climate neutrality and for strengthening its competitiveness at global level. This requires an active engagement and co-creation with all relevant stakeholders.

Activities supporting a policy toolbox for boosting industrial R&I in the EU may include:

- Events and publications (e.g. information, communication, dissemination, etc.) ;
- Studies including technology assessment and foresight, needs and impact analysis, stakeholder engagement and consultations;
- Policy support activities, including technical support.

Details will be provided in the texts of the calls for tender.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 0.70 million from the 2025 budget

9. Raw Materials Events

It is envisaged to procure activities for the organisation of events (conferences, workshops or seminars), including the Raw Materials Week through Framework Contracts before the end of 2025.

DG GROW is organising the Raw Materials Week in the fourth calendar quarter of 2025, covering set of events including the High-Level Conference on Raw Materials.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q4 2025

Indicative budget: EUR 0.80 million from the 2025 budget

10. Update of the Material System Analyses (MSA)

The Material System Analysis (MSA) data sets investigate the flows of materials through the EU-27 economy in terms of entry into the EU, flows through the economy, stock accumulation, incl. end-of-life management. They contain key material specific data and information, to support the monitoring of the circular economy as well as providing useful information for other activities. The MSAs support the RM policy development, and in the mid-term provide a basis for developing sound sustainable resource management strategies. They also contain useful information supporting other activities, such as the monitoring of the circular economy. This action will entail collecting new data and information for the MSA of Critical Raw Materials.

Duration: 15 months

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q3 2025

Indicative budget: EUR 0.50 million from the 2025 budget

11. Support for studies related to recognised schemes (Article 30, Annex IV) measure in the Critical Raw Materials Act CRM Act

Under CRMA Article 30, scheme owners of CRM sustainability certification schemes may request recognition by the Commission. Recognised schemes may then be used to demonstrate compliance with the sustainability criterion for Strategic Projects. Beyond this immediate relevance, the recognition of certification schemes is also intended to give the Commission a tool to promote convergence and overcome fragmentation of sustainability standards systems by setting out key requirements and granting recognition to those schemes that fulfil them.

There is a need for a service provider to assist the Commission in implementation tasks related to the recognised schemes provisions of the CRMA.

Duration: 48 months

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q2 2025

Indicative budget: EUR 0.40 million from the 2025 budget

12. Analytical support for studies related to circularity and sustainability provisions under Art. 5 and 34 of the Critical Raw Materials Act

Under CRMA Article 5, the Commission shall adopt, by 1 January 2027, delegated acts to supplement the CRMA by providing for Union recycling capacity benchmarks expressed as a share of the strategic raw materials available in relevant waste streams. There is a need for a service provider to assist the Commission in implementation of this delegated act.

CRMA article 34 sets out that the Commission is empowered to establish delegated acts linked with article 28 to inter alia specify requirements for the technical design and operation of the data carrier, refer to technical standards to be used, set out rules on unique product identifier. There is a need for a service provider to assist the Commission in implementation of these delegated acts. The estimated timing for the adoption of these delegated acts is November 2027 (same time as entry into force of the requirements of Art. 28).

Duration: 48 months

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q2 2025

Indicative budget: EUR 0.11 million from the 2025 budget

13. Impact assessment of the advanced materials act

Impact assessment of the advanced materials act

Objective: Reflecting the growing importance and demand for advanced materials to support the competitiveness of European industries and the twin green and digital transition, the European Commission will work on an Advanced Materials Act to support the research and innovation process through to manufacturing and deployment, as announced in the mission letter of Commissioner Zaharieva.

The objective of this action is to assess the need for EU action and the potential economic, social and environmental impacts of alternative policy options that could be proposed in the Advanced Materials Act. The impact assessment will collect evidence and assess the need for action, including legislative or non-legislative proposals. It will support the Commission in the design of the advanced materials act. Among other aspects, it must:

- Analyse the problem and problem drivers ;
- describe relevant objectives for the EU action;
- describe policy options, assess their potential impacts and
- suggests how expected results could be monitored and evaluated.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q4 2025

Indicative budget: EUR 0.50 million from the 2025 budget

14. European Standardisation Panel Survey

Expected outcome:

The European Standardisation Panel Survey (ESPS) will be designed to collect data on standardisation activities of companies. The ESPS aims to create a comprehensive dataset to analyse the standardisation activities of innovation ecosystem actors and to identify trends for use by standardisation policy makers and stakeholders, including standard development organisations. The ESPS will also contribute to assessing how public R&I funding addresses the standardisation needs of industry. The current action is the second edition of the survey.

The ESPS will serve as input for scientific research on the standardisation activities of companies and the implementation of standards, providing essential intelligence for further valorisation policy measures. The survey results can also be used to develop strategies for involvement in European and international standardisation, facilitating the identification of new trends.

The analysis will complement the Code of Practice on standardisation and the first edition of the ESPS by raising awareness of the importance of standardisation for businesses.

Scope:

For businesses, standardisation serves as a strategic tool by preparing the market for a new product, even if the new product is still in the early stages of development.

Despite progress in recent years, standardisation research, with all of its facets – from creation through the development process to implementation – remains less pivotal compared to innovation research. This is primarily due to the lack of comprehensive empirical data, despite excellent theoretical reviews on the topic. Following the successful implementation of the [first edition of the ESPS](#), there is a need to expand the geographical scope by ensuring full participation from more EU Member States. This action will also allow for comparative analytics and trend analysis of the data from the different editions.

Against this background, a second ESPS will be launched to collect and analyse data from European companies and research institutions in the field of standardisation.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q2/2025

Indicative budget: EUR 0.06 million from the 2025 budget

15. Analytical support for studies related to circularity and sustainability provisions under Art. 4-7 of the Ecodesign for Sustainable Products Regulation (ESPR, REGULATION (EU) 2024/1781)

As part of the implementation of ESPR legislation, the Commission is preparing a Delegated Act on iron and steel products, scheduled to be adopted by end of 2026. This delegated act, in compliance with ESPR Articles 4-7, may include performance and/or information requirements related to circularity and environmental sustainability aspects of steel products and products with high steel content. There is a need for a service provider to assist the Commission in implementation of this delegated act.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q3/2025

Indicative budget: EUR 0.10 million from the 2025 budget

16. International Cooperation

16.1. AI for Public Good 1: Innovative AI-powered cancer imaging solutions for breast and prostate diagnosis

As part of the international cooperation on AI for Public Good in the area of health, innovative solutions are to be implemented for cancer imaging detection relying on AI algorithms that later can be offered to hospitals and clinical centers in need of advanced technologies.

Technical teams will train, test, enhance and optimise existing AI models and algorithms for breast and prostate cancer diagnosis using images. The training will draw upon generative AI and machine learning as appropriate, and will use anonymised data (including synthetic data) from the EU, as well as learn from the experience of the initiatives launched under the European Cancer Imaging Initiative, including EUCAIM. The set of innovative services to be procured through domain experts by the EC for development and testing are:

- Train, test, enhance and optimise existing AI models and algorithms for breast and prostate cancer diagnosis using images. The training will draw upon generative AI and machine learning as appropriate, and will use anonymised data (including synthetic data) from the EU. The AI Act and GDPR legislation will be used as common frameworks to ensure data protection of the data used within third countries. When required, privacy-preserving technologies will be exploited to guarantee data is kept private.
- Sources of, mainly magnetic resonance imaging data will be identified and organised according to ethical and privacy requirements and equipped with efficient and secure

access mechanisms. Transfer learning and domain adaptation will be explored as potential sources to apply the AI models and algorithms to low and middle-income countries.

- Required level of enhanced accuracy of models will be identified and validated, prior to their testing. Testing will be undertaken for each use case (breast and prostate cancer) in low- and middle-income countries to be identified by the applicants.
- Following the tests, the experts will plan and initiate the steps towards regulatory approval of the algorithms, for use in real life scenarios.
- The enhanced AI models and guidelines to their use in diagnosis will be delivered as open access to EU researchers, as well as to stakeholders from other world regions (in particular to low-to-middle income countries).
- The teams should also assess the potential to provide the AI models and their diagnosis guidelines and training possibly using virtual and remote learning, as a service to countries in need through e.g. hosting in high computing facilities.
- Synergies with ongoing activities and projects already running under the scope of Cancer Mission and Digital Europe Programme will be sought.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Second quarter of 2025

Indicative budget: EUR 2.40 million from the 2025 budget

16.2. AI for Public Good 2: Innovative AI-powered solutions for emergency response and crisis management

As part of the international cooperation on AI for Public Good in the area of emergency response, innovative solutions and services are to be implemented to face natural disasters such as wildfires and flooding. This will be done through a combination of advanced technologies including AI, geographic information systems, and real-time data analytics empowering emergency responders to anticipate, optimize, and track resource allocation, coordinate response efforts more effectively. The goal is to implement an **open, modular, accessible, multi-hazard platform** that harnesses the potential of artificial intelligence (AI) to significantly enhance emergency response capabilities during natural disasters, supporting them with accurate data. The ecosystem will leverage existing global, national and regional systems like the Global Wildfire Information System ([GWIS](#)) and National Emergency Response Information System [NERIS], and link. with/draw from EU initiatives providing relevant data, such as Copernicus or Destination Earth.

The set of innovative service to be procured by the EC for phases II (development), III (testing) are:

- Development of the platform and integrating the existing Global Wildfire Information System (GWIS) that already covers the entire planet. Synergies with EU initiatives providing relevant data, such as Copernicus or Destination Earth, are to be sought.
- Host the platform in cloud-based servers.
- Deployment in several countries in Latin America (mainly Central America, the Carabean and Colombia).
- Support for the EU (DG ECHO) to use the platform as part of the Union Civil Protection Mechanism (UCPM).
- Assess the potential to provide the platform as a service, hosted in high computing facilities in order offer emergency response capabilities to countries in need at broader scale. Prepare the scaling-up and hosting.
- Initial analysis on how to expand the platform's capabilities to a second disaster (flood).

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Second quarter of 2025

Indicative budget: EUR 2.00 million from the 2025 budget

16.3. AI for Public Good 3: Innovative AI-powered solutions for urban reconstruction

Under this proposal, a Local Digital Twin for reconstruction based on AI models will be developed. The tool will allow urban planners to simulate and evaluate potential rebuilding scenarios based on damage assessments and precise reconstruction costs.

The set of innovative services to be procured by the EC for phases II (development), III (testing) are:

- Expert teams from EU and outside will identify data sources and datasets containing 3D virtual replicas of buildings in urban areas of third countries where digital twin will be tested/deployed (e.g. Ukraine).
- The technical team will organise the data and make it accessible according to security, ethical, privacy etc. requirements as agreed upon by all stakeholders including end-users.
- The technical team will develop and train supporting AI algorithms for building damage assessment and precise reconstruction estimates.
- The virtual replicas and the AI algorithms will be integrated into a Geographical Information System (GIS)-based solution for a complete offering of a digital twin based on AI-algorithms for reconstruction.

- The technical team will design, develop and test the productive version of a Digital Twin for reconstruction based on requirements gathered from potential users and the pilots conducted in Phase I.
- Initial stages of deployment of the productive solution in one country: Ukraine.

The technical team will also assess the technical feasibility of offering the Local Digital Twin as a service to countries in need at broader scale, hosted in cloud-based facilities. Existing EU initiatives and programmes will be explored to that end. A proposal of roadmap will be provided.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Second quarter of 2025

Indicative budget: EUR 2.00 million from the 2025 budget

16.4. AI for Public Good 4: Innovative AI-powered solutions for electric grid optimisation

In the area of electric grid optimisation, innovative solutions will be implemented to dynamically integrate renewable energy sources and adapt to increasingly variable demands. Leveraging AI, these solutions will enhance energy efficiency, promote optimal usage, and support the transition to a more sustainable and resilient energy system.

The set of innovative solutions to be procured through domain experts by the EU are:

- Developing, training and optimising a comprehensive set of AI-based tools for the flexible management of digitally operated edge electric-grid systems. This will involve integrating existing modelling approaches to simulate long-term flexibility scenarios and provide a robust assessment tool.
- Running laboratory simulations to validate the proposed data exchange mechanisms and simulate complex systems.
- Testing and validating tools in real-world conditions across various EU locations.
- Deploying in third countries with specific needs, such as South America.

The teams should also assess the feasibility of providing grid optimisation tools as a service to countries with specific needs, leveraging cloud-based or high-performance computing solutions. To support this effort, existing EU initiatives and programs will be explored. To that end, a roadmap will be provided.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Second quarter of 2025

Indicative budget: EUR 3.00 million from the 2025 budget

Grants to identified beneficiaries

Proposals are invited against the following topic(s):

1. Quantum Internet Framework Partnerships Agreement– launching the second Specific Grant Agreement - Research and Innovation Action (SGA)

Expected outcome:

Proposals submitted under the Second Specific Grant Agreement (SGA2) for the FPA on "Building the Quantum Internet" (HORIZON-CL4-2021-DIGITAL-EMERGING-02-19) are expected to achieve the following outcomes, building on the achievements made by the SGA1 and demonstrating concrete steps (in terms of improved functionality, distance, accessibility, cost-effectiveness and real-world deployments) towards the realisation of a quantum internet:

1. The realization of quantum communication technology that is scalable, secure, reliable, and ready for manufacturing.
2. The achievement of entanglement distribution over distances reaching or exceeding 500 km, incorporating quantum repeaters.
3. The demonstration of a proof-of-principle quantum internet infrastructure with a prototype (lab conditions) of a long-distance quantum communication fibre network that uses quantum repeaters capable of connecting metropolitan area networks, demonstrating interoperability of various approaches and scalability of the architecture.
4. The integration of advanced quantum network applications (e.g. secret key sharing, distributed quantum computation, blind quantum computation) into classical network infrastructures (i.e. orchestration platforms) over a quantum network including quantum repeaters.
5. Platform-independent software and network stack demonstration that can operate on a quantum communication network involving at least two quantum computing nodes with quantum memories, ensuring the network's resistance to known forms of cyber-attacks.
6. Demonstration of the maturity of quantum networks by showcasing the technologies developed by the project and demonstrating and validating use cases in a real-world environment.

Scope:

Projects should focus on making significant steps towards the practical realization of a quantum internet:

- Develop the foundational technologies and network architectures needed to establish a quantum internet that interconnects quantum computers, simulators, and sensors through quantum networks.
- Further develop and mature the hardware components and systems needed for a quantum internet, such as quantum sources, detectors, memories, and repeaters, using the platforms identified as most promising according to objective criteria.
- Further develop and mature the software for a quantum internet, as well as integrating quantum network applications into network infrastructure.
- Propel the innovation and deployment of quantum internet components and systems capable of operating across extensive real-world networks.
- Encourage collaboration across disciplines and sectors to address the technological, computational, and societal aspects of building the quantum internet, including maximisation of its potential contributions to economic growth, technological sovereignty, and strategic autonomy.
- Contribute to the development of international standards and ensure interoperability across different quantum technologies, facilitating the secure and efficient exchange of quantum information, while promoting, where possible, sustainable practices.
- Build and operate pilot testbeds, in order to demonstrate technologies, architectures, operation and integration of hardware and software elements and systems in real-world deployments, for taking further steps towards the realisation of a quantum internet.
- Demonstrate pilot use cases for a quantum internet, and evaluate them with a focus on enabling upgradability towards general quantum connectivity. Engage with potential end users and service providers to maximise the uptake potential of use cases, targeting future commercial services.

Proposals should demonstrate synergies with actions already carried out under HORIZON-CL4-2021-DIGITAL-EMERGING-02-19: Framework Partnership Agreements in Quantum Communications, and with any other relevant European projects.

Proposals should also contribute to spreading excellence across Europe, for example, through the involvement of EU Widening Countries.

In this topic the integration of the gender dimension (sex and/or gender analysis) in research and innovation content is not a mandatory requirement; however, should proposers consider it to be of relevance for their proposal, they are strongly encouraged to integrate it.

Technology Readiness Level: Activities are expected to start at TRL 4-5 and achieve TRL 6-7 by the end of the project – see General Annex B.

Eligibility conditions - Participation limited to legal entities established in MS only, or in specified ACs or other 3rd countries in addition to MS:

The conditions are described in General Annex B. The following exceptions apply: In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, and security, it is important to avoid a situation of technological dependency on a non-EU source, in a global context that requires the EU to take action to build on its strengths, and to carefully assess and address any strategic weaknesses, vulnerabilities and high-risk dependencies which put at risk the attainment of its ambitions. For this reason, participation is limited to legal entities established in Member States, Iceland and Norway, and Israel.

For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, shall not participate in the action.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Specific grant agreement awarded without call for proposals in relation to a Framework Partnership Agreement

Indicative timetable: Second quarter of 2025

Indicative budget: EUR 47.50 million from the 2025 budget

2. Presidency Event (conference): Technologies for Europe 2026

Events of a major strategic nature, which are focused and attract a broad spectrum of stakeholders, are important in assessing past activities, identifying policy options and priorities, and planning future actions.

The European Commission will support the organisation of a Presidency conference in 2026, in cooperation with a government holding the EU Presidency of the European Union at the time, as well as with interested regions.

This event may cover aspects of industrial technologies, including the twin green and digital transformation of European industry, in particular green and circular technologies and materials, as well as relevant digital technologies.

This event is co-funded and co-organised by the European Commission and the rotating Presidency of the Council, the latter of which is the named beneficiary of the grant in question, via a responsible ministry or agency of the EU Member State holding the Presidency.

The evaluation committee will be composed fully by representatives of EU institutions.

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Subcontracting is not restricted to a limited part of the action.

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Legal entities:

This event is co-funded and co-organised by the European Commission and the rotating Presidency of the Council, the latter of which is the named beneficiary of the grant in question, via a responsible ministry or agency of the EU Member State holding the Presidency.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: Q1-4, 2026

Indicative budget: EUR 0.20 million from the 2025 budget

3. Presidency Event (conference) on AI in Science 2025

Expected Outcome: Informing of and providing a platform to debate and implement the AI in Science policies of the European Commission with stakeholders and Members States

Scope: Two days of discussions and matchmaking on AI in Science issues and trends with high level policy decision makers at Member State, European and international level, as well as scientific community.

Procedure – Evaluation Carried out by EU Staff: The evaluation committee will be composed fully of representatives of the European Commission.

This particular conference, organised by DG RTD and the rotating Presidency of the Council of the European Union, the latter of which is the named beneficiary of the grant in question (usually via a Member State Ministry), will raise awareness of the strategic importance of incorporating AI in science, bring together all stakeholders to discuss the challenges and opportunities and build a European AI in science community.

Grant awarded without call for proposals according to FR Article 198 (a, b, c, d, f, g).

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Subcontracting is not restricted to a limited part of the action.

Legal entities:

This event is co-funded and co-organised by the European Commission and the rotating Presidency of the Council, the latter of which is the named beneficiary of the grant in question, via a responsible ministry or agency of the EU Member State holding the Presidency.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: Q4 2025

Indicative budget: EUR 0.35 million from the 2025 budget

4. Organisation of the Presidency Event European Quantum Technologies Conference (EQTC) 2025

Expected Outcome: The EQTC 2025, the latest in the EQTC series, will be dedicated to reinforcing Europe's leadership in quantum technologies by fostering and promoting a collaborative ecosystem that includes academia, industry, and governmental bodies. This event will serve as a critical platform for discussing strategic directions, sharing innovations, and engaging the entire European quantum technology community.

Scope: This three-day conference will focus on a variety of quantum technologies such as quantum computing, quantum communication, quantum sensing and metrology, and quantum materials. High-level decision-makers from Member States, the European Commission, and key international stakeholders will engage in discussions aimed at advancing the quantum technology sector within Europe.

Procedure – Evaluation Carried out by EU Staff: The evaluation committee will be composed fully of representatives of the European Commission.

Legal and financial set-up of the Grant Agreements - Lump sum grant (flexible - option 2): Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021

authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025)²⁴³.

Legal entities:

Responsible ministry or agency of the EU Member State holding the Presidency

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: Third quarter of 2025

Indicative budget: EUR 0.30 million from the 2025 budget

5. Heading 7 of Space - Monitoring Space

5.1. Consolidate European commercial SST capabilities on sensors

Specific conditions		
<i>Expected contribution per project</i>	<i>EU</i>	The Commission estimates that an EU contribution of around EUR 15.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>		The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>		Research and Innovation Actions
<i>Admissibility conditions</i>		The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 50 pages.

²⁴³ This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, and safeguard the Union’s strategic assets, interests, autonomy, or security, namely avoiding a situation of technological dependency on a non-EU source, in a global context that requires the EU to build on its strengths and to carefully assess and address strategic weaknesses, vulnerabilities and high-risk dependencies, participation is limited to legal entities established in Member States. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union’s strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of ‘restrictions for the protection of European communication networks’ (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.²⁴⁴</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p>

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The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

	<p>The granting authority can fund a maximum of one project.</p> <p>The evaluation committee could be partially composed by representatives of EU institutions.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>The beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. Activities proposed by third parties (FSTP proposals) are to be selected according to selection criteria agreed between the granting authority and the beneficiaries.</p> <p>A “third party”, submitting a FSTP proposal, could be either an entity or a consortium of entities.</p> <p>In accordance with article 207 of the EU Financial Regulation the maximum amount to be granted to each third party can exceed EUR 60,000. This derogation is justified by the fact that the foreseen actions carried out by third parties will target breakthrough techniques and technologies to disruptively improve SST sensors performance and/or operations. Indeed, costly hardware (such as radar, optical...) development and implementation tests are sought on this topic.</p> <p>The minimum amount of <u>each</u> FSTP proposal is expected to be in the range of EUR 2 million.</p> <p>The funding rate for each FSTP proposal is 80%. Third parties shall be asked to co-finance 20% of the total amount of each FSTP proposal.</p> <p>The total amount of the EU contribution supporting FSTP proposals is expected to be in the range of EUR 14,5 million</p> <p>As per Article 16.2 (Ownership of results) of the EU Grants: AGA — Annotated Grant Agreement (V1.0– 01.05.2024), the granting authority does not obtain ownership of the results produced under the action. Similarly, the IPR generated in FSTP activities cannot be retained by the beneficiaries.</p>

The rationale behind the proposed set up of this topic is the following:

The EUSST Partnership (i.e. the identified beneficiary), foreseen in the Space Regulation (art. 54 -EU 2021/696) composed of 15 Member States, has been created (cf. Implementing Decision 2022/1245) in 2022. The EUSST Partnership is entrusted to contribute with their national assets to enhance capabilities to monitor, track and identify space objects and space

debris with the aim of further increasing the performance and autonomy of capabilities under the SST sub-component at Union level.

The implementation of the Space Regulation (cf. EU 2021/696) provisions related to the SST sub-component, foresees the incorporation of commercial capabilities (Art. 54(1.a) of the Space Regulation) so to complement national capabilities. The EUSST Partnership (i.e. the FSTP granting authority) will launch an open call for proposals in order to select the best FSTP proposals within the proposed scope.

The current set up of this topic allows to support in priority the development of innovative commercial sensors. Nevertheless, in case of low private sector participation on FSTP actions the beneficiary (i.e. EUSST Partnership) will be able to use the remaining budget for the upgrade and/or development of national sensors applying the same proposed co-funding scheme and scope. This logic is reflected in the wording : «The beneficiary MAY provide financial support to third parties (FSTP)”.

Hardware development, prototyping and high TRL requested at the end of the FSTP action (at least TRL 5) requires important budgets, well beyond 60k€. Furthermore, it is expected that, at the end of FSTP support, the beneficiaries will pursue the developments in order to reach the operational stage hence contributing to the overall EUSST sensors network.

We foresee to have at least 4 FSTP projects ; if there are only, or less than, 4 FSTP projects, the remaining budget will be used to upgrade national sensors with novel technologies & techniques. The same cofinancing scheme will be applied to national sensors upgrades.

The overall objective of this Topic is to stimulate fast integration of R&D technologies and technics in operational sensors. Co-funding from Third Parties is expected in order to confirm their engagement towards the achievement of operational SST capacities. This means that :

1. Out of the 15M€ indicative budget, 0,5M€ is expected to cover EUSST coordination activities (e.g. drafting the FSTP call for proposals SoW, managing the reviews of each FSTP action).
2. Coordination activities are funded at 100%.

Expected Outcome: Projects developed under this topic are expected to contribute to the following outcomes:

- To reinforce European strategic autonomy and resilience in space surveillance and tracking capabilities (sensors and associated data processing) by leveraging innovation and competitiveness of the European industry and start-ups
- To develop and/or improve existing commercially available assets and SST-related technologies fostering competition and market development, allowing the European SST industry and start-ups to be competitive on global markets.

- To complement, as defined by EUSST Partnership's architecture studies, existing Member States patrimonial SST capacities with European privately-owned ones, assuring interoperability and adopting global standards.
- To improve European SST operational capabilities by supporting the extension of space-tracking infrastructure located outside continental Europe.
- To prepare EU industry to capture new SST markets in the domains by proposing competitive, cutting-edge sensors.

Scope: The following sensors and data processing R&I activities, funded through FSTP, should be addressed to tackle the above expected outcomes:

- Novel, cost-effective sensor concepts and technologies capable of detecting, tracking and surveying objects in order to improve the state-of-the-art performance according to the target orbit regime (e.g. less than 10 cm in LEO, 30 cm in GEO). Note: Priority should be given to projects focusing on LEO detection even though preeminent proposals in other orbit regimes will be considered.
- Autonomous sensor concepts to increase operational robustness, to reduce response times, to reduce operation costs, amongst others.
- Tools, techniques, and technologies necessary to significantly improve the efficiency of future or existing commercial sensor's network by streamlining the scheduling and tasking of its sensors.
- State-of-the-art technologies and concepts improving sensors' tracking and surveillance performances (measurements quality (noise; bias; measurements rates ...), tracks accuracy (track noise; track duration...), sensors' field of view...
- Cost-effective tracking and/or surveillance sensor concepts expanding orbital coverage of Member States patrimonial SST capacities and/or meeting commercial market needs.
- Any promising technology for precise tracking and data processing.

FSTP proposals are expected to promote cooperation between different actors (industry, SMEs and research institutions) and consider opportunities to quickly turn technological innovation into commercial use in the space sector.

FSTP proposals are expected to start between TRL 2 and TRL 4 and reach at least TRL 5 by the end of the project. The reference TRL (Technology Readiness Level) definition is the ISO 16290:2013 applicable to the space sector.

FSTP proposals under this topic should explore synergies and be complementary to already funded actions in the context of technology development at component level. In particular, it is expected that FSTP proposals make use of existing European technologies and/or building blocks at component level contributing to European non-dependence and strengthen

competitiveness. Furthermore, proposed activities should be complementary to national activities and activities funded by the European Space Agency (ESA).

Financial support to third parties is expected to start no later than 7 months after the start date of the grant.

Indicative timetable: in quarter Q4 of year 2025.

Legal entities:

The Constituting National Entities having concluded an agreement creating the SST partnership

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant awarded without call for proposals according to Financial Regulation Article 198 (f)

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative budget: EUR 15.00 million from the 2025 budget

5.2. Consolidate European commercial SST capabilities on Services

Specific conditions		
<i>Expected contribution per project</i>	<i>EU per</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>		The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>		Research and Innovation Actions
<i>Admissibility conditions</i>		The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 50 pages.
<i>Eligibility conditions</i>		The conditions are described in General Annex B. The following exceptions apply: In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely avoiding a

	<p>situation of technological dependency on a non-EU source, in a global context that requires the EU to build on its strengths and to carefully assess and address strategic weaknesses, vulnerabilities and high-risk dependencies, participation is limited to legal entities established in Member States. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.²⁴⁵</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p> <p>The evaluation committee could be partially composed by representatives of EU institutions.</p>
<i>Legal and financial</i>	<p>The rules are described in General Annex G. The following exceptions</p>

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The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

<i>set-up of the Grant Agreements</i>	<p>apply:</p> <p>The beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. Activities proposed by third parties (FSTP proposals) are to be selected according to selection criteria agreed between the granting authority and the beneficiaries.</p> <p>A “third party”, submitting a FSTP proposal, could be either an entity or a consortium of entities.</p> <p>In accordance with article 207 of the EU Financial Regulation, the maximum amount to be granted to each third party can exceed EUR 60,000. This derogation is justified by the fact that foreseen actions carried out by third parties target competitive, close-to-market, added-value SST services proposed worldwide by the EU industry to capture new SST markets.</p> <p>The total amount of the EU contribution supporting FSTP proposals is expected to be in the range of EUR 3,8 million.</p> <p>The amount to be granted to each action implemented by a third party is expected to be in the range of EUR 600,000.</p> <p>As per Article 16.2 (Ownership of results) of the EU Grants: AGA — Annotated Grant Agreement (V1.0– 01.05.2024), the granting authority does not obtain ownership of the results produced under the action. Similarly, the IPR generated in FSTP activities cannot be retained by the beneficiaries.</p>
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Expected Outcome: Projects developed under this topic are expected to contribute to the following outcomes:

- To prepare EU industry and start-ups to capture new SST markets by proposing innovative and competitive services.
- To reinforce European strategic autonomy and resilience in the SST domain by leveraging commercial services while enhancing EU SST operational effectiveness.
- To foster competition and market development in SST-related commercial services considering the needs of relevant actors such as, but not limited to, satellites Owners and Operators, insurances companies, regulators...
- To demonstrate and foster the development of an ecosystem of lucrative, advanced, and tailor-made commercial services, which may rely on, or be provided on top of, the basic public services delivered by EU SST.

Scope: The R&I areas, funded through FSTP, which should be addressed to tackle the above-mentioned expected outcomes are:

- Cost-effective techniques and technologies to develop future SST commercial services or to substantially improve existing ones, additional or complementary to the ones currently delivered by EU SST.
- Development or improvement of algorithms for added value services (with respect to EU SST public services), for instance: measurements correlation, initial Orbit determination, orbit determination, covariance estimation, objects characterisation, application of alternative metrics, manoeuvre detection, secure exchanges between Owners/Operators (for example taking advantage of, but not limited to, technologies such as AI or blockchain).
- Development of evaluation methods of collision probability applied, but not limited to manoeuvrable or non-manoevrable objects, including satellite constellations.
- Improvement of algorithms for data fusion for a more efficient use of data and information from the same object coming from different sensors.
- Expansion or improvement of EU industry proprietary space objects catalogue (targeting in priority debris below 10 cm in LEO and below 50 cm in GEO).
- Development or improvement of new orbit propagation models for efficient propagation of the orbital population (e.g. cloud propagation models to propagate the debris cloud generated after a collision or fragmentation ...).
- Development or improvement of simulators including in-orbit objects population and sensors, as trade-off support for future commercial services, added value services and sensors.

FSTP proposals are expected to promote cooperation between different actors (industry, SMEs and research institutions) and consider opportunities to quickly turn technological innovation into commercial use in space.

FSTP proposals are expected to start at least TRL 2 and reach at least TRL 6 by the end of the project – The reference TRL definition is the ISO 16290:2013 applicable to the space sector. FSTP proposals under this topic should explore synergies and be complementary to already funded actions in the context of technology development at component level. In particular, it is expected that FSTP proposals make use of existing European technologies and/or building blocks at component level contributing to European non-dependence and strengthen competitiveness. Furthermore, proposed activities should be complementary to national activities and activities funded by the European Space Agency (ESA).

Out of the 4M€ indicative budget, 0,2M€ is expected to cover EUSST coordination activities (e.g. drafting the FSTP call for proposals SoW, managing the reviews of each FSTP action). Coordination activities are funded at 100%.

Financial support to third parties is expected to start no later than 7 months after the start date of the grant.

Indicative timetable: in quarter Q4 of year 2025.

Legal entities:

The Constituting National Entities having concluded an agreement creating the SST partnership

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant awarded without call for proposals according to Financial Regulation Article 198 (f)

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative budget: EUR 4.00 million from the 2025 budget

6. Heading 2 of Space - Acting in Space

6.1. ISOS Pilot Mission Coordination & Support Action

Specific conditions		
<i>Expected contribution per project</i>	<i>EU per</i>	The Commission estimates that an EU contribution of between EUR 2.00 and 2.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>		The total indicative budget for the topic is EUR 2.50 million.
<i>Type of Action</i>		Coordination and Support Actions
<i>Admissibility conditions</i>		The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 60 pages.
<i>Eligibility conditions</i>		The conditions are described in General Annex B. The following exceptions apply: In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, participation is limited to legal entities established in Member States and the following

	<p>associated countries: Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.</p> <p>For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees approved by the eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic, assets, interests, autonomy, or security.</p> <p>The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that:</p> <p>a) control over the applicant legal entity is not exercised in a manner that restrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action;</p> <p>b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate;</p> <p>c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>

<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁴⁶ .
<i>Security Sensitive Topics</i>	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: The strategic objective of this topic is to support the development of capabilities to ‘Act in Space’ through demonstrating in space a pilot mission by 2030 related to In-Space Operations and Services (ISOS). The envisaged ISOS pilot mission shall provide the necessary seed components for a service infrastructure, available to the European in-space ecosystem (including the EU assets), driving the generation of a new in-space economy, providing enhanced in-orbit technology demonstration and maximising EU technology non-dependence.

This pilot mission will largely contribute to ensure EU’s freedom of action in space, increase the resilience and protection of EU assets in space and foster the development of the new in-space economy. A pioneering, novel and scalable mission concept, which is unique compared to other initiatives among all space-faring nations is envisaged. The mission will build on previous R&I with an operational mission concept, focusing on application and service demonstration, with a concrete view to commercial and governmental usage. The detailed mission concept will be derived in close coordination with EU Member States and EEA countries through a dedicated ISOS Pilot Mission Advisory Group (PMAG)¹⁶¹.

This Coordination and Support Action addresses the coordination of the development R&I actions for the **implementation of the ISOS pilot mission** and the support of its evolution towards a flagship for commercial and governmental services.

The project is expected to contribute to the following outcomes, in close and continuous coordination with the European Commission services and the ISOS Pilot Mission Advisory Group¹⁶¹:

²⁴⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Creating and promoting an inclusive, transparent and scalable ISOS ecosystem that allows on-boarding of governmental or commercial actors' initiatives putting Europe at the centre of a new in-space economy offering global in-space services;
- Contribution to the ISOS Pilot Mission Objectives provided in the technical annex¹⁶³;
- Elaboration of the ISOS Pilot mission detailed architecture, based on the high-level mission requirements provided in the technical annex¹⁶³;
- Coordination of the implementation of the four components identified in topics HORIZON-CL4-2025-02-SPACE-21/22/23/24, in particular with regards to the determination of interfaces among the mission components, identification of dependencies, exchange of requirements and performance indicators;
- Support to the elaboration of key standards for future institutional and commercial ISOS missions together with the projects implementing the four mission components and other relevant stakeholders;
- Ensuring the availability of results to the next mission phases.

This topic will contribute to, in the medium to long term, developing, deploying global space-based services and contribute to fostering the European space sector competitiveness, as stated in the expected impact of this destination.

Scope: To tackle the above expected outcomes, the following R&I actions must be addressed taking into account the provided technical annex¹⁶³:

- Overall coordination of the ISOS pilot mission preparation up to detailed design¹⁶⁴ and elaboration of a mission deployment plan and detailed system architecture that is modular and scalable, in close cooperation with all mission components and in continuous coordination and under the supervision of the PMAG;
- Ensure interoperability and compatibility between mission components (for instance interfaces among components and exchange of requirements and performance indicators);
- Perform mission minimum cost estimate and cost impact assessment for new plug-ins (mission components, service demonstrations, technologies, etc.) to the mission and system in coordination with the PMAG;
- Elaboration of an effective conflict resolution regime;
- Setup and management of a key technology and service provider group (TSPG) that will be composed of selected future beneficiaries of the four mission components identified in topics HORIZON-CL4-2025-02-SPACE-21/22/23/24. The group composition is expected to consider and contribute to a balanced provision of Member States' countries expertise and capabilities to the overall ISOS pilot mission. This group should be integrated in the decision-making processes of the CSA;

- Dissemination and Communication activities on the ISOS pilot mission, including the creation of a professional video to visualise and promote the ISOS pilot mission;
- Derive an in-space services product tree – functional specification of the pilot mission system;
- Community consultation and preparation of a proposal for a *Pilot Mission and Future Space Ecosystem Plug-in Specification* which should allow third-party on-boarding the ISOS pilot mission ecosystem, at system and technology level;
- Proposal for a pilot mission evolution plan towards a flagship for commercial and governmental services (seed point for future flagship development and deployment plan, to be considered as future component of the EU Space Programme). The project should propose at least three use cases for the servicing of EU flagship assets through the delivery of a concept of operations (CONOPS);
- Contribution to standardisation, regulatory and legal framework actions including stakeholder consultation;
- System risk management plan: identification of global risks, incl. technical, operational, managerial, legal, IP, and related to external interferences, and elaboration of possible mitigation actions.

The project is expected to collaborate with those selected under topics HORIZON-CL4-2025-02-SPACE-21, 22, 23, 24, in order to ensure interoperability and the necessary and sufficient documentation and information sharing for the implementation of the Pilot Mission, to make economies of scale in sharing best practices, defining common processes for addressing the different challenges, ensuring efficient monitoring and review, organising dissemination and communication activities, etc. Such collaboration among all those projects will be formalised by a collaboration agreement.

Indicative timetable: publication in Q4 of 2025.

Legal entities:

The beneficiaries will be the eligible coordinators of the awarded proposals from topics HORIZON-CL4-2025-02-SPACE-21, 22, 23, 24.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative budget: EUR 2.50 million from the 2025 budget

Scientific and technical services by the Joint Research Centre

1. JRC support on the obligations for monitoring (Art. 21) in the Critical Raw Materials Act

Objective: To continue the collaboration with the JRC on various aspects of raw materials policy. JRC Petten will provide support to analyse and integrate data provided by Member States on the Critical Raw Materials projects (Art. 21).

Duration: 48 months

Type of Action: Provision of technical/scientific services by the Joint Research Centre

Indicative timetable: Q2 2025

Indicative budget: EUR 0.40 million from the 2025 budget

2. JRC analytical support for studies related to circularity and sustainability provisions under art. 28 of the Critical Raw Materials Act

Objective: CRMA Art. 28 establishes that by 24 November 2025, the Commission shall adopt an implementing act establishing the format for labelling placing on the market certain products (MRI devices, wind turbines, industrial robots, various household appliances, motor vehicles and light means of transport, electric motors, including where integrated in other products). The obligations on economic operators apply from 2 years after entry into force of the implementing act (i.e. latest by 24 November 2027). While not required by the CRMA, the Commission may also provide guidance on the format for the information on removal steps, on chemical composition and any other details relating to the data carrier (the “information folder”). There is a need for analytical support by the JRC to assist DG GROW in the implementation of this delegated act. The JRC can build the analysis on in-house knowledge and the stakeholder interactions conducted in the context of the ELV permanent magnet provisions. Additional literature analysis and stakeholder interactions may be required. When necessary and possible, JRC will also liaise with standardisation bodies and relevant technical committees.

Duration: 48 months

Type of Action: Provision of technical/scientific services by the Joint Research Centre

Indicative timetable: Q2 2025

Indicative budget: EUR 0.09 million from the 2025 budget

Other budget implementation instruments

1. Use of individual experts to support raw materials policy (1)

This action will support the use of appointed individual independent experts for assisting the Commission with advising and assisting the Commission services with the implementation and design of the EU Raw materials policy, and reinforcing the Commission capacity to elaborate evidence-based raw materials policy and the industrial transition to a climate-neutral Europe. Individual experts will work on quantitative analysis of the criticality of individual raw materials based on the EU methodology; critical raw materials supply and demand; future raw materials trends and innovation potential; and technology, infrastructure and raw materials requirements for the industrial transition: review of national exploration programmes.

The tasks of individual experts would include attending bilateral meetings with Commission services, remote analysis, drafting and preparatory work. The experts will be highly qualified and specialised, and will be selected on the basis of objective criteria, following an open call for expressions of interest. A special allowance of EUR 450/day will be paid to the expert appointed in its personal capacity who acts independently and in the public interest.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative timetable: Q4 2025

Indicative budget: EUR 0.80 million from the 2025 budget

2. Use of individual experts to support raw materials policy (2)

This action will support the use of appointed individual independent experts for advising and assisting the Commission services with the implementation of the European Critical Raw Materials Act. Individual experts will support the Commission in the assessment of applications for the recognition of a critical raw materials project as a Strategic Project. In this context, the experts will assess proposed projects that can cover extraction, processing or recycling of raw materials in terms of their technical feasibility, financial maturity, compliance with environmental-, social- and governance-related standards as well as with the United Nations Framework Classification for Resources.

The tasks of individual experts would include remote analysis, preparatory work, drafting of reports as well as participation in discussions and meetings with other experts and Commission services. The experts will be highly qualified and specialised, and will be selected on the basis of objective criteria, following an open call for expressions of interest. A special allowance of EUR 450/day will be paid to the expert appointed in its personal capacity who acts independently and in the public interest.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative timetable: Q2 2025

Indicative budget: EUR 0.93 million from the 2025 budget

Subscription Actions

1. Support to Hydrogen in the Economy

The Commission represents the European Union in the International Partnership for Hydrogen and Fuel Cells in the Economy. The annual financial contribution will be paid to the entity responsible for managing it.

Type of Action: Subscription action

Indicative timetable: As of Q1 2025

Indicative budget: EUR 0.05 million from the 2025 budget

Indirectly managed actions

Indirectly managed actions delegated to ESA

1. ESA.1 - Heading 5 of Space - Using Space on Earth – Satellite navigation - EGNSS Evolution: Technology and infrastructure-related R&D activities

Actions under this area will address upstream R&D activities. They will cover the maturing of the existing technologies and the development of new and emerging technologies (e.g. LEOPNT), the engineering activities for the further evolution of Galileo and EGNOS existing systems, technical studies for the assessment of exploratory system concepts and/or responding to new mission needs and a changing environment, the development and maintenance of state-of-art system tools and technical test-beds, the implementation of actions agreed at Programme level to reduce the dependence of the supply chain on non-EU markets, the definition, design, development and implementation of experimental satellite demonstrator, and others.

These activities will be implemented by ESA under the Contribution Agreement between the Commission and ESA. The procurement actions under this section will affect the essential security interests of the Union. In accordance with Art. 136 of the EU Financial Regulation, restricted participation will therefore be established in the tender specifications. In this case, participation should in principle be open only to entities established in the EU Member States. Participation of entities established in Horizon Europe associated countries or in third countries will be decided on a case-by-case basis with the approval of the annual work plan submitted to Commission under the Financial Framework Partnership Agreement (FFPA).

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 58.00 million from the 2025 budget

2. ESA.2 - Heading 3 of Space - Using Space on Earth – Telecommunications - IRIS2 Space infrastructure: Development and Validation

The Commission has adopted a proposal for a Union Programme for Secure Connectivity. The future IRIS² system – Infrastructure for Resilience, Interconnectivity and Security by Satellites – should upon the GOVSATCOM component of the EU Space Programme, which should also take advantage of additional national and European capacities and develop further the European Quantum Communication Infrastructure (EuroQCI) initiative. This action should therefore enable and support the development and validation actions for the construction of the initial space and ground infrastructure required for the provision of governmental services.

These activities are due to be entrusted to ESA under a Contribution Agreement between the Commission and ESA. In particular, ESA will perform the following tasks: infrastructure development and validation activities as required to achieve full validation activities (including performances) of IRIS², that will be implemented by the future Concessionaire.

IRIS² implementation will include system architecture tasks, engineering and design of non-recurring items, development, manufacturing, security and technology EU non-dependence aspects and all necessary qualification and tests of space and ground segments. It will also include all the new developments that are needed to achieve the programme's objectives, as well as all the early validations deemed as necessary for an early elimination of the technical risks (e.g., interface and functional testing between blocks).

However, the detailed perimeter of activities for the Entrusted Tasks industrial activities will be based on the selected contractors' final proposal.

The procurement actions under this section will affect the essential security interests of the Union. In accordance with Art. 136 of the EU Financial Regulation, restricted participation will therefore be established in the tender specifications. In this case, participation should in principle be open only to entities established in the EU Member States. Participation of entities established in Horizon Europe associated countries or in third countries will be decided on a case-by-case basis.

Proposals under this topic, aiming or contributing to technology development for EU non-dependence are expected to be complementary and in synergies with already funded actions directly managed by the Commission, in the context of critical space technology for EU non-dependence developments. In particular, the topics: Critical Space Technologies for EU non-dependence (HORIZON-CL4-2021-SPACE-01-81, HORIZON-CL4-2022-SPACE-01-82, HORIZON-CL4-2023-SPACE-01-72, HORIZON-CL4-2024-SPACE-01-73); HORIZON-CL4-2025-02-SPACE-71: Space Critical EEE Components for EU non-dependence – RISC-V Microprocessor on 7nm; HORIZON-CL4-2025-02-SPACE-72: Space Critical Equipment and Related Technologies for EU non-dependence – Chip Scale Atomic Clocks and Solar Cells; HORIZON-CL4-2025-02-SPACE-73: Space Critical EEE Components for EU non-

dependence – Connectors; HORIZON-CL4-2025-02-SPACE-74: Space Critical EEE Components for EU non-dependence – Advanced Packages and Memories.

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 75.50 million from the 2025 budget

3. ESA.3 - Heading 11 of Space - Boosting Space through IOD/IOV opportunities - In Orbit Demonstration/Validation (IOD/IOV) service

To ensure EU non-dependence and competitiveness in technologies, there is a clear need for a regular, sustainable, cost-effective and responsive In Orbit Demonstration/Validation (IOD/IOV) service in the EU. Space flight heritage in real conditions and environment is often required to de-risk new technologies, products, concepts, architectures, services and operations techniques be that for unique or recurrent, institutional or commercial missions.

Intended results of the action is to provide a service for regular aggregation (if needed), launch and operations in orbit for IOD/IOV experiments; the objective is to have at least one opportunity every year during the Horizon Europe implementation period. This will contribute to reduce the time to market or operational use of new technologies, products, concepts, architectures, and operations techniques.

The IOD/IOV activities intend to provide a regular and cost-effective service and solution for common flight ticket actions (management, spacecraft design including reuse of existing solutions, assembly, integration and tests, launch and operations) based on EU solutions both for the spacecraft (i.e. platform, experiments aggregation, operations in orbit including preparation and associated Ground Segment) and for the launch services.

The scope of the activities may include mission design, integration and implementation, for all the necessary tasks to prepare, provide and operate spacecraft(s), together with the related ground segment, which accommodates the selected IOD/IOV experiments as well as the associated launch services.

For the aggregation and operations, the activities include:

- System studies, at ground and space level, including the compatibility with the available launchers;
- Input to the launch mission analysis performed by the launch service provider;
- Selection, assembly, integration and testing of the spacecraft(s) and related ground segment;
- Management of interfaces with and between the different IOD/IOV experiments, between the spacecraft and the launcher and between the spacecraft and the ground segment;

- Preparation of the spacecraft(s) for the flight;
- In-orbit testing and operations including data provision.

Concerning launch aspects, IOD/IOV activities should support the European launcher exploitation policy, therefore relying as far as possible on EU manufactured launcher solutions launched from the EU territory. The actions will include the provision of flight opportunities with EU manufactured launchers which encompass the mission analysis, the verification of interfaces between the spacecraft and the launcher, the preparation of launch campaign and the flight up to the injection of the spacecraft(s) on the required orbit(s).

These activities and associated procurement actions will be implemented by ESA in line with the Contribution Agreement between the Commission and ESA.

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 8.00 million from the 2025 budget

Indirectly managed actions delegated to EUSPA

1. EUSPA.3 - Heading 12 of Space – Boosting Space through support to entrepreneurship – 2025 CASSINI activities

Business development, acceleration and upscaling of start-ups will be fostered across all space areas under the CASSINI Space Entrepreneurship Initiative. CASSINI will provide support to business and innovation-friendly ecosystems, including the strengthening of business skills in the space market segments and digital services based on space data. The objective is to make start-ups and scale-ups investment-ready and able to secure venture capital funding, including by organising events. Synergies with the InvestEU programme and the EU Space programme will be established. The following action will be funded: CASSINI innovation support.

Legal entities:

European Union Agency for the Space Programme (EUSPA), Janovského 438/2 170 00 Prague 7 – Holesovice Czech Republic

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 0.50 million from the 2025 budget

2. EUSPA.2 - Heading 6 of Space - Using Space on Earth – Services & Data coming from satellites, both Earth Observation and navigation

We need to make the best use of EGNSS and Copernicus capacities for EU citizens, companies and society. Research and innovation will foster the development of EGNSS and

Copernicus downstream applications and promote their adoption in the EU and worldwide. A call for proposals under this area will address downstream R&D activities to be launched by the European Union Space Programme Agency (EUSPA) in accordance with the specification included in Appendix below.

Legal entities:

European Union Agency for the Space Programme (EUSPA), Janovského 438/2 170 00 Prague 7 – Holesovice Czech Republic

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 15.00 million from the 2025 budget

Appendix to action EUSPA.2

Call - Services & Data coming from satellites

HORIZON-EUSPA-2026-SPACE-03

Overview of this call²⁴⁷

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ²⁴⁸	Indicative number of projects expected to be funded
		2025		
Opening: 14 Oct 2025				
Deadline(s): 10 Feb 2026				
Heading 7 - Using Space on Earth – Services & Data coming from satellites, both Earth Observation and navigation				
HORIZON-EUSPA-2026-SPACE-02-51: Space Data Economy	IA	10.00 ²⁴⁹	1.50 to 2.50	5
HORIZON-EUSPA-2026-SPACE-02-52: Innovative space-based applications enhancing capabilities for a resilient	IA	5.00 ²⁵⁰	1.50 to 1.80	4

²⁴⁷

²⁴⁸ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

²⁴⁹ Of which EUR 10.00 million from the 'na' budget.

²⁵⁰ Of which EUR 5.00 million from the 'na' budget.

Europe				
Overall indicative budget		15.00		

General conditions relating to this call

Destination 5: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data

Heading 7 - Using Space on Earth – Services & Data coming from satellites, both Earth Observation and navigation

Proposals are invited against the following topic(s):

HORIZON-EUSPA-2026-SPACE-02-51: Space Data Economy

Call: Services & Data coming from satellites	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.50 and 2.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-9 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector. Activities may start at any TRL.
<i>Procedure</i>	To ensure a balanced portfolio covering all the areas described in the scope section, grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each priority area, provided that the applications attain all thresholds.
<i>Legal and financial set-up of the Grant Agreements</i>	Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁵¹ .
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Expected Outcome: This topic aims at supporting activities that are enabling or contributing to overcoming sectorial demand fragmentation and support scale up of the space data²⁵² use, increasing the wider uptake and mass adoption of the EU space data in selected priority areas that are strategic for Europe. To that end, proposals under this topic should aim to deliver results that are directed, tailored towards and contributing to some or all of the following expected outcomes:

- Foster the development and prepare for the commercialisation of innovative space-based solutions that supports an informed decision making of relevant stakeholders (e.g. energy operators, city and regional authorities, financial institutions, insurance companies, corporations, food/industrial manufacturing etc.);
- Leverage EGNSS-based and Copernicus-based capabilities to modernize and increase the efficiency and resilience of energy infrastructure and/or urban environment, and/or support the use of green financing schemes addressing environmental challenges as well as implementing climate resilient practices in the downstream sector;
- Analyse and support the consolidation of the sectorial demand for solutions based on EGNSS and Copernicus services and data, possibly also exploring the synergies with EU space based secure communication and surveillance, addressing the challenges identified in priority areas and leveraging the relevant regulatory environment.

Scope: Europe has made a considerable investment in its space infrastructure, resulting in two pivotal outcomes: first, a strategic autonomy of the continent, and second, a surge in economic growth driven by space-enabled applications. Additionally, Europe boasts a thriving sector offering space data, services and products, which continues to show steady growth.

The market for space data and services is fragmented, both on the side of supply and demand. A fragmented and underdeveloped demand from both public and private users does not allow for scaling up, hindering the realization of the full potential of the EU Space infrastructure.

Space data can be used in almost all industry verticals in the EU and worldwide. While some sectors are already using space data to high extent, providing benefits to the citizens, economy and environment, other sectors are only marginally testing the ground. The demand creation is progressing, however, in order to foster the space data economy, it is needed to scale up and accelerate the market uptake and mass adoption of space data, in the context of the applicable legal framework.

²⁵¹ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁵² Space data relates to data and services provided by the EU Space programme components.

In order to achieve this, the proposals should focus on the development of innovative solutions, tailored to the specific needs of downstream industries and verticals and addressing inherent sectorial demand fragmentation issues. There is also an untapped potential of using space data to bolster green and digital transitions, presenting an opportunity to create innovative solutions in these domains.

Moreover, the projects should leverage the existing relevant sectorial regulations and policies, by exploring how the proposed solutions using space data and services can support these regulations.

Projects supporting the integration of EU Space data and services into vertical market segments should focus on one of the following selected priority areas (and identify which area is being addressed in the proposal):

- **Energy** (renewable energy, energy efficiency, energy infrastructure) In the face of energy supply shortages and climate change, the demand for renewable energy is rapidly increasing. Driving this demand is the fact that renewables are reducing greenhouse gas emissions and transitioning the world towards a sustainable future. Moreover, energy efficiency initiatives aim to optimize energy consumption across various sectors, from manufacturing to residential spaces, fostering a more sustainable and responsible approach to energy use. To expedite this transition, space data and services enable energy stakeholders to make informed decisions about the deployment and management of renewable energy infrastructure and to gain insights into energy consumption patterns across diverse sectors and geographic regions. Examples of downstream innovation in this context is the use of GNSS and EO technologies to enhance energy infrastructure resilience and efficiency in smart grids by adapting to real-time demand changes or to facilitate the monitoring and management of electricity distribution networks.
- **Climate adaptation and Environmental footprint reduction**: The implementation of effective Climate adaptation measures can foster climate resilience and reduce vulnerability to climate change, in communities, ecosystems and infrastructure. GNSS and EO technologies provide accurate and up to date data for assessing climate risks, prioritizing adaptation measures and allocate resources effectively to reduce environmental footprint, enabling a deeper understanding of climate change impacts and informing effective mitigation strategies. This includes the development of innovative downstream applications to prepare and respond effectively, improving disasters preparedness through early warning systems for extreme events, strengthening biodiversity and ecosystems services, promote afforestation and reforestation, manage water resources and water allocation more efficiently, implement climate resilient agriculture practices. Moreover, space-based solutions play a crucial role to reduce resource consumption, environmental impact, pollution and ecological degradation, fostering industry sustainability practices. Proposals should address one or more of the aforementioned areas, leverage digital tools based on innovative technologies such as AI/Big Data/Quantum/Blockchain/Digital Twins, etc., explore synergies with Satcom, as

well as ensure the involvement of private sector as end users for the proposed solution and commercial exploitation.

- **Green financing and insurance:** Green financing involves the allocation of funds to support environmentally sustainable projects. Concurrently, green insurance offers coverage for risks tied to sustainability, climate change, and eco-friendly activities. These insurance products incentivize responsible practices, providing protection against environmental challenges. Both green financing and insurance contribute to fostering sustainability by directing financial resources and risk management strategies toward initiatives that promote positive environmental and social outcomes. Space technologies can play a pivotal role by providing accurate data to ensure transparency, accountability and risk management for the assessment and monitoring of environmental projects funded by green financing.
- **Liveable cities of the future:** The share of the world's population living in cities is constantly increasing. Currently governments have the goal to move cities towards a better liveable future. Tomorrow cities can drive and take advantage of innovation and new downstream space technologies as they are the biggest digital platform. Solutions should develop space-based applications and technologies with focus on commercial exploitation for the modernisation of cities. Examples of areas to be analysed are smart waste and waste water managements, drinking water management, green constructions, urban green, urban mobility and public transports, urban logistics, health and well-being, public safety, sustainable tourism, as well as the monitoring of urbanisation patterns (e.g. land coverage, urban sprawl, heat islands), assessing the link between urban and peri urban/rural areas and interdependencies of cities with their regional areas, improving disasters preparedness and preventive/proactive urban planning, supporting investment in more climate resilient infrastructures etc. In parallel with modernisation of liveable cities another important objective is to preserve the past and valorise the cultural heritage through monitoring sites mitigating the effects of mass tourism, climate change, subsidence and pollution. Synergies with satellite communications can also be explored. Proposals are expected to ensure the involvement of cities' authorities as either end users or regulatory authorities supporting the uptake of the proposed innovative solutions.

Each proposal should address only one of the four areas outlined above, which must be clearly identified.

The proposals under this topic should present a business plan.

Proposals are expected to promote cooperation between different actors (industry, SMEs and research institutions, city authorities, and where relevant, Copernicus Entrusted Entities) and consider opportunities to quickly turn technological innovation into commercial exploitation.

When applicable and upon request of the granting authority, the beneficiaries may be asked to interact with the EU Space Programme, through the most relevant expert group(s) configuration(s), with the purpose of giving feedback about the EU Space Programme.

Proposals under this topic should explore synergies with Space Based Communication, Navigation and Surveillance (CNS) systems, and be complementary to already funded actions in the context of technology development at component level. In particular, it is expected that projects make use of existing European technologies and/or building blocks at component level contributing to European non-dependence and strengthen competitiveness. Furthermore, proposed activities should be complementary to national activities and activities funded by the European Space Agency (ESA) and if applicable Destination Earth.

Proposals addressing Galileo PRS (Public Regulated Service) related applications are not in the scope of this action.

International cooperation is encouraged in this topic.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-EUSPA-2026-SPACE-02-52: Innovative space-based applications enhancing capabilities for a resilient Europe

Call: Services & Data coming from satellites		
Specific conditions		
<i>Expected contribution per project</i>	<i>EU per</i>	The Commission estimates that an EU contribution of between EUR 1.50 and 1.80 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>		The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>		Innovation Actions
<i>Eligibility conditions</i>		<p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The following additional eligibility criteria apply: This topic requires participation, as beneficiaries, of at least two crisis or security practitioner²⁵³ organisations or agencies, established in at least two different EU Member States or Associated Countries. For participants with practitioner status, applicants must fill in the table “Information</p>

²⁵³ Crisis or security practitioners has the meaning of organisations or agencies actively engaged in crisis or security operations, involved in e.g., law enforcement, customs, environmental crime management, smuggling and trafficking fighting and counter-terrorism, border and maritime surveillance, critical infrastructure operators, public safety, fundamental rights, disaster first/second responders, civil protection authorities, humanitarian aid etc.

	about security practitioners” in the application form with all the requested information, following the template provided in the submission IT tool.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-9 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector. Activities may start at any TRL.
<i>Procedure</i>	To ensure a balanced portfolio covering all the areas described in the scope section, grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each priority area, provided that the applications attain all thresholds.
<i>Legal and financial set-up of the Grant Agreements</i>	Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁵⁴ .

Expected Outcome: Projects’ results are expected to contribute to some or all of the following outcomes:

- Foster the development and validation of integrated synergistic space technologies that support the operational work of crisis and security practitioners (e.g. law enforcement, customs, first/second responders, critical infrastructure operators, border or coast guards, civil protection authorities etc);
- Improve, operationalize and mainstream EGNSS-based and possibly Earth observation-based services that enhance the resiliency and security (including cybersecurity) of the EU, reinforcing their acceptance, adoption and usage of the developed solution(s) among practitioners. Synergies with secure satellite communications can also be explored;
- Improve the wide uptake and penetration of EU Space Programme data and services, and in particular EGNSS differentiators (OSNMA - Open Service Navigation Message Authentication, HAS - High Accuracy Service, RLS - Return Link Service, EWSS – Emergency Warning Satellite Service etc.), in the everyday operations and tasks of crisis and security practitioners, increasing their awareness and ability to operate efficiently and with safety;

²⁵⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Identify new, and analyse existing, capability gaps of security practitioners, that space technologies can bridge, demonstrating on the field innovative solutions based on EGNSS and possibly other EU Space Programme components such as Copernicus;
- Create new space-based commercial opportunities for innovative businesses serving practitioner organisations.

Scope: Proposals should be built on the exploitation of the distinguishing features of Galileo and EGNOS seeking to enhance the way practitioners prepare for and manage crises and security operations. Proposals should develop applications and technologies that focus on commercial exploitation in one of the following priority areas, which must be clearly indicated:

- Development of EGNSS-based spoofing-proof downstream solutions to support the digital transformation of security practitioners in security-critical operations (e.g. Law Enforcement Agencies, Custom Authorities, Border and Coast Guards, etc) in various applications, including: environmental crimes management, prevention of smuggling and trafficking, counter-terrorism, border and maritime surveillance, migration management, fugitive search, public safety and fundamental rights, illegal poaching, customs operations and Electronic Freight Transport Information, dangerous goods transportation, usage of robots and/or automated Galileo-enabled platforms for surveillance, etc.;
- Development of EGNSS-based downstream solutions to support the resiliency and functioning of critical infrastructures in EU (e.g. digital infrastructure, drinking water supply and distribution, water waste management, healthcare, e-government, etc.);
- Development of EGNSS-based downstream solutions to support crisis management operations: drone-supported operations, improved and safer asset management systems, AR/VR for first responders, novel EGNSS smartphone-sized or wearable technologies, UneXploded Ordnance (UXO) risk assessment and clearance for humanitarian operations, etc.

Proposals are also expected to address cybersecurity threats in the description of the solution(s).

Proposals should, when relevant, integrate other data sources/services from other EU Space Programme components, in particular Copernicus and/or GOVSATCOM. Where appropriate, the beneficiaries are encouraged to interact with the relevant Entrusted Entities managing the Copernicus Emergency Management Service and/or the Copernicus Security Service.

The action focuses on the development of close to market EGNSS downstream applications through the realisation of large-scale demonstration and implementation projects, with the participation of relevant crisis and/or security practitioners.

Developed applications should have a clearly defined commercial potential and should respond to user needs. The solution(s) developed is/are expected to achieve TRL 7-9 by the end of the project.

Proposals should deliver new innovative applications, identifying and addressing existing gaps, leveraging the existing relevant sectorial regulations and policies and exploring how the solutions implemented using space data and services can address these regulations and be commercialised. Proposals should also highlight the expected impact and define a clear market uptake strategy, presenting a credible post-project pathway to operations. The developed solutions may integrate other non-space technologies like IoT, big data, artificial intelligence, drones, 5G, augmented/mixed reality etc.

For proposals under this topic:

- A Business Plan should be provided as part of the proposal, to evidence the user requirements, the sustainability of the project, and opportunities for wide adoption in Europe according to standards and operational needs;
- Participation of industry, in particular SMEs and midcaps, is encouraged;
- Participation of, or outreach to, entities based in countries without a space tradition is encouraged;
- Involvement of post-graduate researchers (engineers, scientists, and others) is also encouraged, for example through professional work experience or through fellowships/scholarships when applicable;
- When appropriate, Social Sciences and Humanities (SSH) should be considered to maximize public trust in the solution and robustness and quality of results/data.

Proposals addressing Galileo PRS (Public Regulated Service) related applications are not in the scope of this action.

Proposals should seek to leverage and/or create synergies with relevant projects and activities funded under Horizon Europe Cluster 3: Civil security for society, reinforcing the cross-fertilization of research and innovation in this domain.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

Horizon Europe - Work Programme 2025
Digital, Industry and Space

Budget^{255 256}

	Budget line(s)	2025 Budget (EUR million)	2027 Budget (EUR million)
Calls			
HORIZON-CL4-2025-01		476.00 ²⁵⁷	45.00
	<i>from 01.020240</i>	476.00	45.00
HORIZON-CL4-2025-02		134.00 ²⁵⁸	
	<i>from 01.020240</i>	134.00	
HORIZON-CL4-2025-03		404.10	
	<i>from 01.020240</i>	404.10	
HORIZON-CL4-2025-04		132.00	
	<i>from 01.020240</i>	132.00	
HORIZON-CL4-2025-05-two-stage		161.00	
	<i>from 01.020240</i>	161.00	
Other actions			
Public procurement		33.82	
	<i>from 01.020240</i>	33.82	

- ²⁵⁵ The budget figures given in this table are rounded to two decimal places.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.
- ²⁵⁶ The contribution from Cluster 4 for the year 2025 is EUR 100.77 million for the Missions work programme part and EUR 18.38 million for the New European Bauhaus Facility work programme part.
- ²⁵⁷ To which EUR 12.00 million from the 'Food, Bioeconomy, Natural Resources, Agriculture and Environment' budget and EUR 6.00 million from the 'Climate, Energy and Mobility' budget will be added making a total of EUR 494.00 million for this call.
- ²⁵⁸ To which EUR 5.00 million from the 'Climate, Energy and Mobility' budget will be added making a total of EUR 139.00 million for this call.

Horizon Europe - Work Programme 2025
Digital, Industry and Space

Specific grant agreement		47.50	
	<i>from 01.020240</i>	<i>47.50</i>	
Grant awarded without a call for proposals according to Financial Regulation Article 198(e)		3.35	
	<i>from 01.020240</i>	<i>3.35</i>	
Grant awarded without a call for proposals according to Financial Regulation Article 198		19.00	
	<i>from 01.020240</i>	<i>19.00</i>	
Provision of technical/scientific services by the Joint Research Centre		0.49	
	<i>from 01.020240</i>	<i>0.49</i>	
Expert contract action		1.73	
	<i>from 01.020240</i>	<i>1.73</i>	
Subscription action		0.05	
	<i>from 01.020240</i>	<i>0.05</i>	
Indirectly managed action		157.00	
	<i>from 01.020240</i>	<i>157.00</i>	
Estimated total budget		1570.04	45.00

EN

Horizon Europe
Work Programme 2025

8. Climate, Energy and Mobility

IMPORTANT NOTICE:

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

This draft is made public before the adoption of the work programme to provide potential participants with the currently expected main lines of this work programme. Only the adopted work programme will have legal value.

The adoption of the work programme will be announced on the Horizon Europe website and on the Funding and Tenders Portal.

Information and topic descriptions indicated in this draft may not appear in the final work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

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Introduction

The overarching driver for this cluster is to accelerate the twin green and digital transitions and associated transformation of our economy, industry and society with a view to achieving climate neutrality in Europe by 2050, and to increase the competitiveness of the European economies. This encompasses the transition to greenhouse gas neutrality of the energy and mobility sectors by 2050 at the latest (as well as that of other sectors not covered by this cluster), while boosting their competitiveness, resilience, and utility for citizens and society. Europe has been at the forefront of climate science and is committed to keep delivering the knowledge for enabling efficient pathways and just transitions to climate neutrality.

Activities of this work programme support the implementation of the Paris Agreement and the United Nations Sustainable Development Goals¹. By putting research and innovation at the heart of our economy, the EU aims to create more jobs and improve the competitiveness of its industry. On this basis, activities of this work programme will support the European Commission's Net-Zero Industry Act and Clean Industrial Deal, a more circular and resilient economy, as well as enhanced climate adaptation, preparedness and solidarity. This will finally contribute to sustaining our quality of life and strengthening European societies and their social and economic model.

Cluster 5 supports the EU's strategic objectives through activities included in this work programme and through the support of Institutional European Partnerships² which are implemented through dedicated structures. Although the latter activities are not included in this work programme, it is of great importance to maximise synergy and coherence between activities regardless of their implementation mode³. Cluster 5 contributes also to the Strategic Energy Technology Plan (SET Plan) objectives and its domain-specific implementation plans.

Activities in this work programme will contribute to all **Key Strategic Orientations (KSOs)** of the Strategic Plan⁴:

- **The green transition:** Horizon Europe R&I activities must support Europe to become the world's first climate-neutral continent by 2050 and to tackle biodiversity loss and pollution. At least 35% of Horizon Europe's resources are committed to be spent on climate action and 10% for 2025-2027 on biodiversity action.

¹ Activities in this cluster will contribute to multiple SDGs, with the most direct impact on SDG 7 (Affordable and clean energy), SDG 9 (Industry, Innovation and Infrastructure), SDG 11 (Sustainable Cities and Communities), and SDG 13 (Climate Action). In addition, SDG 3 (Good health and well-being), SDG 6 (Clean Water and Sanitation), SDG 8 (Decent work and economic growth), and SDG 12 (Responsible production and consumption) will be positively impacted.

² Clean Hydrogen, Transforming Europe's rail system, Integrated Air Traffic Management, Clean Aviation

³ Activities specifically targeting fuel cells and hydrogen are primarily supported through calls for proposals of the European Partnership on Clean Hydrogen. However, in justified cases and in line with topic descriptions, specific aspects of hydrogen and fuel cells can be supported outside of the Clean Hydrogen Partnership

⁴ https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/strategic-plan_en

- **The digital transition:** Research to support the digital transition is key to Europe's competitiveness and open strategic autonomy, and to setting human-centred standards. It is also key to achieving the green transition. In 2021-2027, it is agreed to invest at least EUR 13 billion from Horizon Europe in core digital technologies.
- **A more resilient, competitive, inclusive and democratic Europe:** Europe's democratic values and principles need a strong foundation so they can be promoted globally. Horizon Europe research activities will help reinforce this foundation. This includes research on civil security, on a fair and environmentally friendly economic model, on health and wellbeing and on democratic participation.

Open strategic autonomy and securing Europe's capacity in developing and deploying critical technologies are overarching drivers that apply across all three key strategic orientations.

To contribute to these programme-level KSOs, cluster 5 will deliver on six specific **expected impacts**. In this work programme, each expected impact has been transformed into a specific **Destination** (see table below). This Destination-based work programme structure follows a thematic centre-of-gravity approach. Activities can have a cross-cutting character and will, in practice, often contribute to multiple expected impacts. The specific contribution to the overall expected impacts is explained in the introductory text of each Destination.

Expected Impact (Strategic Plan 2025-2027)	Destination (Cluster 5 work programme 2025)
21. Advancing science for a transition to a climate-neutral and resilient society	1. Climate sciences and responses for the transformation towards climate neutrality
22. Facilitating a clean and sustainable transition of the energy and transport sectors towards climate neutrality through cross-cutting solutions	2. Cross-sectoral solutions for the climate transition
23. Ensuring more sustainable, secure and competitive energy supply through solutions for smart energy systems based on renewable energy solutions	3. Sustainable, secure and competitive energy supply
24. Using energy in buildings and industry in an efficient, affordable and sustainable way	4. Efficient, sustainable and inclusive energy use
25. Achieving sustainable and competitive transport modes	5. Clean and competitive solutions for all transport modes
26. Multimodal systems and services for climate-neutral, smart and safe mobility	6. Safe Resilient Transport and Smart Mobility services for passengers and goods

According to the **intervention logic** of this work programme, Destination 1 fosters climate science and thus helps to identify effective and efficient pathways and responses to climate change. Destination 2 supports different cross-cutting technologies and solutions for climate, energy and mobility applications. Destination 3 and 4 focus mainly on energy issues – Destination 3 on making energy supply more sustainable, secure and competitive; Destination 4 on reducing energy demand of buildings and industry and enabling their more active role in a smart energy system. Destination 5 and 6 improve the performance of transport modes and mobility solutions – Destination 5 increases the competitiveness and climate/environmental performance of different transport modes; Destination 6 advances mobility services and solutions at system level for passengers and goods.

Horizon Europe is the EU's research and innovation support programme in a system of European and national funding programmes that share similar policy objectives. Projects that have been awarded a grant under a Horizon Europe call have the possibility to also receive funding under other EU programmes, including relevant shared management funds. In this context, applicants should actively seek **synergies** with other R&I-relevant EU, national or regional programmes (such as European Regional Development Fund (ERDF)⁵, European Social Fund Plus (ESF+)⁶, Just Transition Fund⁷, LIFE⁸, Innovation Fund⁹, InvestEU¹⁰, European Defence Fund (EDF)¹¹), where appropriate, as well as private funds or financial instruments.

With a view to be more effective in achieving impact, proposals are expected to synergise with other relevant initiatives funded at EU level, including the **Knowledge and Innovation Communities (KICs)** of the European Institute of Innovation and Technology (EIT)¹². The innovation ecosystems created and nurtured by the EIT KICs (e.g., EIT Climate-KIC, EIT InnoEnergy, EIT Raw Materials) can in particular contribute to building communities or platforms for coordination and support actions, by sharing knowledge or disseminating the exploitation of the project results. Where relevant, and without prejudice to the direct participation of the EIT KICs in the R&I activities under this cluster, proposals are encouraged to explore other forms and means of service provisions that are complementary to the activities of the EIT KICs. Collaboration with other innovation communities that can support the project implementation and impact is also encouraged. Any such cooperation should be based on adequate intellectual property management strategies.

⁵ https://ec.europa.eu/regional_policy/en/funding/erdf/

⁶ <https://ec.europa.eu/esf/main.jsp?catId=62&langId=en>

⁷ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/just-transition-mechanism/just-transition-funding-sources_en

⁸ <https://ec.europa.eu/environment/archives/life/index.htm>

⁹ <https://ec.europa.eu/inea/en/innovation-fund>

¹⁰ https://ec.europa.eu/commission/priorities/jobs-growth-and-investment/investment-plan-europe-juncker-plan/whats-next-investeu-programme-2021-2027_en

¹¹ https://defence-industry-space.ec.europa.eu/eu-defence-industry/european-defence-fund-edf_en; While focusing on civilian applications, there may be synergies with actions conducted under the European Defence Fund or its precursor programmes (Preparatory Action on Defence Research and European Defence Industry Development Programme), e.g. in the field of energy storage and management as well as innovative fuels.

¹² <https://eit.europa.eu/our-communities/eit-innovation-communities>

Research has proven that **Social Sciences and Humanities (SSH)** and stakeholders' involvement including citizens and civil society in projects is pivotal to understanding the societal transformation, including shifts in governance and institutions, socio-political relations, socio-cultural factors and knowledge systems, required for just and sustainable transitions, as well as for effecting technological change. They are addressed in relevant topics across the six destinations of the Cluster 5 work programme. In addition, this work programme pilots the integration of a **Societal Readiness** approach through eight pilot topics and a Coordinating and Support Action (CSA) for monitoring and evaluation: HORIZON-CL5-2026-01-D2-09). This approach is based on Responsible Research and Innovation processes, with a strong focus on interdisciplinarity and knowledge integration. The integration of a Societal Readiness approach into R&I processes aims to address different societal needs and concerns, thereby increasing the potential for societal uptake.

Horizon Europe's approach to **international cooperation** consist of multilateralism and purposeful openness, combined with targeted actions with key third-country partners. Actions focus on aligning national, European and global efforts and investments in research and innovation areas that contribute to achieving key EU priorities. With regard to Cluster 5, the Commission pushes the acceleration of clean energy innovation through the Mission Innovation¹³ Initiative, which was launched at COP21 and currently comprises 24 countries and the European Commission. International cooperation of EU Member States and Associated Countries in the context of Mission Innovation in relevant topics in this work programme is encouraged. In addition, this work programme specifically addresses cooperation with African countries and cooperation on sustainable decarbonisation with major emitting countries around the world, in line with the spirit of the Paris Agreement which emphasises the need for global cooperation on technology development and transfer. Legal entities established in **China** are not eligible to participate in Innovation Actions in any capacity. Please refer to the Annex B of the General Annexes of this Work Programme for further details.

Applicants to calls in this Work Programme are encouraged to consider, where relevant, the services offered by the EU-funded European Research Infrastructures, notably those prioritised by the European Strategy Forum on Research Infrastructures (ESFRI)¹⁴, European Research Infrastructure Consortia (ERICs)¹⁵ and the European Open Science Cloud.

For topics in this cluster, consortia should consider their voluntary contribution in terms of data, indicators, and knowledge to relevant **Joint Research Centre (JRC)** platforms for capitalising the knowledge developed in their projects and become more policy relevant¹⁶:

¹³ <http://mission-innovation.net/our-work/innovation-challenges/>

¹⁴ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

¹⁵ The ERIC Landscape <https://www.eric-forum.eu/the-eric-landscape/>

¹⁶ Contributions with relevant data, indicators, or knowledge to these JRC-managed platforms do not require having JRC as a partner (associated partner/beneficiary requesting zero funding) in a project, unless it is explicitly mentioned in a specific topic of this Cluster.

- Life cycle assessment (LCA) and its relevant application to value chain assessment: European Platform on Life cycle assessment (EPLCA, <https://eplca.jrc.ec.europa.eu/>) and making reference to the Environmental footprint method when applying LCA (<https://ec.europa.eu/environment/eussd/smgp/index.htm>);
- Raw materials: Raw materials information system (RMIS, <https://rmis.jrc.ec.europa.eu/>);
- Soil and soil related issues: European Soil Observatory (ESO, <https://ec.europa.eu/jrc/en/eu-soil-observatory>);
- The natural capital accounting: INCA platform (<https://ec.europa.eu/eurostat/ecosystem-accounts>);
- Strategic Energy Technologies Information System: SETIS (https://setis.ec.europa.eu/index_en);
- The Transport Research and Innovation Monitoring and Information System: TRIMIS (<https://trimis.ec.europa.eu/>);
- The Energy and Industry Geography Lab: EIGL (<https://energy-industry-geolab.jrc.ec.europa.eu/>);
- The Innovation Centre for Industrial Transformation and Emissions (INCITE) (<https://innovation-centre-for-industrial-transformation.ec.europa.eu/>);
- Innovation in the Built Environment Research Group (iBUILT+) (https://joint-research-centre.ec.europa.eu/scientific-activities-z/iresist-home_en).

In addition, consortia should consider their voluntary contribution in terms of knowledge to relevant European Commission (Eurostat) statistical methodologies for capitalising the knowledge developed in their projects and become more policy relevant.

As regards the technology progress monitoring against the European Green Deal Objectives and the ambitions of the Clean Industrial Deal, all actions related to **hydrogen and fuel cells** funded under this work programme should report directly or indirectly on an annual basis in a secure online data collection platform managed by the Clean Hydrogen Joint Undertaking and the European Commission¹⁷. The reporting should consist of filling in the template questionnaire(s) relevant to the project content (and the technology development and TRL).

Instructions for Societal Readiness pilot projects:

Understanding and responding to the needs and concerns of societal actors continues to be a priority for European Commission funded research¹⁸. In Cluster 5 work programme 2025, a Societal Readiness approach is being proposed to deepen relationships between R&I and

¹⁷ https://www.clean-hydrogen.europa.eu/knowledge-management/annual-data-collection_en

¹⁸ <https://eur-lex.europa.eu/eli/reg/2021/695/oj>: See preamble point 51

society. A number of topics¹⁹ within the Work Programme 2025 have been selected as a vanguard for advancing Societal Readiness practices. To support this work, the Commission has setup a common methodology for applicants. The outcomes of this Cluster 5 pilot in Societal Readiness will be closely assessed and analysed through a dedicated Coordination and Support Action *HORIZON-CL5-2026-01-D2-09: Monitoring and Evaluation of the Societal Readiness Pilot*.

The Societal Readiness approach aims, when integrated into R&I processes, to improve the consideration of different societal needs and concerns and to respond to them, thereby increasing the potential for societal uptake. To achieve this, all types of project partners – including Science, Technology, Engineering and Mathematics (STEM) and Social Sciences and Humanities (SSH) profiles – should be engaged and interact effectively and in sustained ways. Inclusive participation early in proposal development and throughout the project will enable an interdisciplinary approach serving the objectives of the topic.

Definitions related to this Societal Readiness pilot follow those instructions.

Proposals submitted for topics that request to follow the Societal Readiness approach are expected to meet all the requirements listed below:

- Resources should be explicitly allocated to cover project activities associated with advancing Societal Readiness. Societal Readiness considerations should be integrated transversally in the proposal, either as a set of tasks across work packages associated with the R&I work, or in the form of a transversal work package.
- Consortia should bring sufficient expertise to support Societal Readiness activities via the inclusion of partners with appropriate expertise in SSH disciplines²⁰. These partners will facilitate the socio-technical interface and enable the design of project objectives, work packages and tasks compatible with Societal Readiness related activities.
- All partners in the consortia should be associated to the Societal Readiness tasks, where relevant, building on interdisciplinarity efforts to facilitate knowledge integration.
- Proposals should clearly address, under section *1.2 Methodology*, how the project will integrate Societal Readiness throughout the proposed work, by demonstrating how they take up the Societal Readiness guiding questions relevant to the subject (see section below).
- Proposals should allocate reasonable resources as part of a dedicated task to engage with the Coordinating and Support Action funded under *HORIZON-CL5-2026-01-D2-09* (e.g., participation in physical format to annual workshops, availability to reply to

¹⁹ HORIZON-CL5-2025-03-D1-06; HORIZON-CL5-2025-02-D3-04; HORIZON-CL5-2026-02-D4-02; HORIZON-CL5-2025-04-D5-01; HORIZON-CL5-2025-04-D6-01; HORIZON-CL5-2025-04-D6-02; HORIZON-CL5-2025-04-D6-11; HORIZON-CL5-2025-04-D6-12

²⁰ For example, profiles with experience in addressing social and cultural perspectives, methodological knowledge to e.g., conduct and analyse interviews, design, and lead co-creation, facilitate inclusion, or otherwise meaningfully support the consideration of and responsiveness to societal needs and concerns.

interviews, punctual exchanges with other Societal Readiness pilot projects, provide access to Societal Readiness related information). Travel costs to attend physical workshops will be covered by topic *HORIZON-CL5-2026-01-D2-09*.

- A public report called *First report on Societal Readiness* should be delivered within the first six months of the project. The report will build on the Societal Readiness approach for the project as set out in the proposal. It should primarily focus on the project's vision for and approach to Societal Readiness; reflections on initial impressions of societal needs and concerns as connected to the project; preliminary responses to the guiding questions; more detailed plans on how Societal Readiness will be addressed (e.g., time plans, roles and responsibilities, relation to tasks/work packages, anticipated results and how these will be integrated into the project activities).
- A public report called *Final report on Societal Readiness* should be delivered within the last three months of the project. The report will reflect upon the project's experience with implementing Societal Readiness approaches; any differences in experience between expected and actual outcomes; challenges and lessons learned from successful or unsuccessful efforts; ways in which different societal actors were identified and engaged in interdisciplinary or intersectoral activities, as well as these actors needs and concerns considered, identified, and responded to; and recommendations for future projects on similar thematic areas. The *Final report on Societal Readiness* is expected to directly address the questions identified in the *First report on Societal Readiness*.

The standard template of the Application Form remains unchanged, and its page limit is increase by two additional pages. The proposed work is expected to reflect an integration of Societal Readiness consideration into the overall project design.

Responsible Research and Innovation (RRI) guiding questions:

The following guiding questions²¹ are offered to support project teams in considering and integrating a Societal Readiness approach in proposals and, subsequently, in projects' implementation. Consideration of questions in the proposal stage helps to ensure a consortium is well positioned to advance Societal Readiness during project implementation. This consideration includes reflecting upon the four dimensions of Responsible Research and Innovation (RRI) namely reflection, inclusion, anticipation, and responsiveness, as indicated next to each question (see complete definition of RRI in the Horizon Europe Programme

²¹ The questions that follow are condensed from and based on the Societal Readiness Thinking Tool elaborated within the EU-funded project NewHoRRizon, and subsequently detailed in Bernstein, M. J., Nielsen, M. W., Alnor, E., Brasil, A., Birkving, A. L., Chan, T. T., Griessler, E., de Jong, S., van de Klippe, W., Meijer, I., Yaghmaei, E., Nicolaisen, P. B., Nieminen, M., Novitzky, P., & Mejlgaard, N. (2022). The Societal Readiness Thinking Tool: A Practical Resource for Maturing the Societal Readiness of Research Projects. *Science and Engineering Ethics*, 28(1), 6. <https://doi.org/10.1007/s11948-021-00360-3>

Guide²²). The following guiding questions are offered as a basis for reflection and may be complemented by other considerations specific to the topic's subject.

- **R&I Goals**: How do the objectives and expected results of the proposal reflect and integrate the diverse societal needs or goals of different social groups potentially involved or affected? (*RRI dimensions: reflection, inclusion, responsiveness*)
- **Societal actors**: How does the proposal identify and include key stakeholder groups in activities? If appropriate, how does the proposal identify and include groups often marginalised or excluded from previous or similar initiatives? (*RRI dimensions: reflection, inclusion*)
- **Benefits and burdens**: Who stands to benefit from envisioned activities of the project and their expected impacts? Who stands to bear the burdens (social, environmental, economic or other)? How are the groups bearing these burdens included in and given a voice in the project? How are possible conflicts of interest and uncertainties managed? (*RRI dimensions: anticipation, reflection, responsiveness*)
- **Objections and concerns**: How does the project, through its activities, plan to identify and respond to the objections or concerns of different groups of societal actors? How could potential undesired consequences of activities, results, outcomes, or impacts be anticipated? How could such consequences be avoided? (*RRI dimensions: reflection, inclusion, anticipation, responsiveness*)

Evaluation of the Societal Readiness aspect:

Societal Readiness will be assessed in the same way as other aspects that belong to 'Methodology' within the Excellence section of the Application form. During the evaluation, all comments under the "Excellence" criterion will be consolidated so that a mark out of five points is issued, which reflects the overall score of the proposal for the "Excellence" evaluation criterion.

Definitions related to Societal Readiness considerations in Horizon Europe proposals and projects

1. Societal Readiness

Societal Readiness²³ is an indicator of R&I results, expressing they have accounted for different societal needs and concerns, thereby increasing its potential for societal uptake and transition towards societal adaptation.

R&I results with well-developed Societal Readiness will:

- better align innovation trajectories with societally desired and needed goals;

²² https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf

²³ Definition informed by NewHoRRizon project's Societal Readiness Thinking Tool (for Applicants) and Geels "Socio-technical transitions to sustainability" <https://newhorizon.eu/thinking-tool/>

- build inclusive and multi-stakeholder coalitions for change;
- understand diverse apprehensions and interests; and
- adapt to overcome undesired aspects of the proposed innovation.

Working toward Societal Readiness means to better understand that R&I should be:

- driven by the needs, values, and expectations of diverse social groups (e.g., gender, age, socio-economic situation, geography, vulnerable persons²⁴, etc.);
- inclusive and transparent in processes and outcomes;
- active in identifying, mitigating, and avoiding negative/providing positive social, environmental, and economic externalities.

Societal Readiness will contribute to more impactful R&I by widening the focus of researchers and innovators from the very beginning or in the course of an innovation effort to address broader, long-term societal concerns. It will therefore support achieving European Commission policy objectives and help achieving the UN's Sustainable Development Goals²⁵.

2. Responsible Research & Innovation (RRI)

To deliver R&I results with well-developed Societal Readiness, the four dimensions of Responsible Research & Innovation offer a helpful starting point:

Responsible Research and Innovation (RRI), as a concept introduced in R&I policy and previous European Commission framework programmes, primarily focuses on *processes* of R&I. In the context of care for the future, RRI offers a set of procedural interventions in policy makers' and researchers' activities by supporting co-creation with societal actors in different ways. Specifically, RRI asks for four dimensions to be practiced in research^{26,27}:

- **Reflection on the goals, values, and activities of R&I:** Reflection is about reasoning on the underlying motivations, assumptions, and commitments driving the R&I work.
- **Inclusion of broader, diverse groups of stakeholders and participants:** Inclusion is closely related to public engagement and stakeholder involvement. It is about involving relevant societal actors in R&I activities from an early stage, and ensuring continuous, open dialogue about desirable outcomes throughout the project.

²⁴ https://home-affairs.ec.europa.eu/networks/european-migration-network-emn/emn-asylum-and-migration-glossary/glossary/vulnerable-person_en

²⁵ In particular SDG5 (Gender equality); SDG10 (Reduced inequalities); SDG16 (Peace, justice and strong institutions)

²⁶ Owen, R., Macnaghten, P., & Stilgoe, J. (2012). Responsible Research and Innovation: From science in society to science for society, with society. *Science and Public Policy*, 39(6), 751–760. <https://doi.org/10.1093/scipol/scs093>

²⁷ Burget, M., Bardone E., Pedaste M., (2017). Definitions and Conceptual Dimensions of Responsible Research and Innovation: A Literature Review. *Science and Engineering Ethics*, 23, 1-19 <https://doi.org/10.1007/s11948-016-9782-1>

- **Anticipation** of possible consequences, knock-on effects, unintended consequences of R&I: Anticipation is about carefully examining both the intended and possible unintended consequences arising from R&I activities, including environmental, health-related, economic, and social impacts.
- **Responsiveness** to recommendations and changes to improve R&I processes in the service of improved public impact: Responsiveness is about aligning R&I activities with the new perspectives, insights, awareness, and values that emerge in the process of being more anticipatory, reflexive, and inclusive in R&I processes. It presupposes a will to learn from practical experience and a capacity to translate this learning into responsible R&I solutions.

These four dimensions inform the guiding questions provided in support of developing proposals and implementing projects aiming to reach a well-developed Societal Readiness.

3. Integration of Social Sciences and Humanities (SSH)²⁸

To achieve a well-developed Societal Readiness of R&I results, social and cultural perspectives need to be covered. This may be done by researchers from Social Science and Humanities (SSH) disciplines²⁹, as those disciplines have developed a wide range of theories and methods to better understand human behaviour and social organisation.

Social Sciences and Humanities (SSH) study aspects of human society:³⁰

- SSH encompass a wide range of disciplines such as sociology and economics, psychology and political science, history and cultural sciences, law, and ethics. Contributions from these research fields are needed to generate new knowledge, support evidence-based policymaking, develop key competences and produce interdisciplinary solutions to both societal and technological issues³¹.
- Social science is the study of people: as individuals, communities, and societies; their behaviours and interactions with each other and with their built, technological, and natural environments. Social science seeks to understand the evolving human systems across our increasingly complex world and how our planet can be more sustainably managed. [...] Social science includes many different areas of study, such as how people organise and govern themselves, and broker power and international relations; how wealth is generated, economies develop, and economic futures are modelled; how

²⁸ SSH disciplines are relevant to R&I in Cluster 5, since they help to investigate the societal aspects of climate, energy and mobility challenges and opportunities. They have been integrated and mainstreamed in Horizon Europe Cluster 5 topics since the start of the Horizon 2020 Framework Programme https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf

²⁹ See above resource, pages 21 – 22, for a list adapted from UNESCO International Standard Classification of Education (ISCED 2011).

³⁰ Foulds, C. & Robison, R. (2018). 'Mobilising the Energy-Related Social Sciences and Humanities', In: Foulds, C. & Robison, R. (eds.) *Advancing Energy Policy: Lessons on the Integration of Social Sciences and Humanities*. Cham: Palgrave Macmillan. 1-12. <https://doi.org/10.1007/978-3-319-99097-2>

³¹ https://research-and-innovation.ec.europa.eu/research-area/social-sciences-and-humanities/ssh-integration_en

business works and what a sustainable future means; the ways in which populations are changing, and issues of unemployment, deprivation and inequality; and how these social, cultural and economic dynamics vary in different places, with different outcomes³².

- Humanities (e.g., disciplines like History, Arts, Philosophy, Theology) are concerned with fundamental, and sometimes unspoken, principles that underpin human cultures, how people reason, how societies are ordered and governed, and how people and societies grapple with issues like responsibility, representation and participation, (in)equality, equity, ethics, faith, and so on, sometimes with attention to constructions of meanings of ‘good’, ‘bad’, ‘desirable’, ‘justice’ etc. (even if indirectly).

Integrating theories, methods, and principles across the full range of SSH is highly relevant for effective interdisciplinary R&I pursuing Societal Readiness.

³² Academy of Social Sciences, in: <https://acss.org.uk/what-is-social-science/>

Calls for proposals

Call - Cluster 5 Call 01-2025 (2-stage) (WP 2025)

HORIZON-CL5-2025-01-Two-Stage

Overview of this call³³

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ³⁴	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025				
Deadline(s): 02 Sep 2025 (First Stage), 31 Mar 2026 (Second Stage)				
Cross-sectoral solutions for the climate transition				
HORIZON-CL5-2025-01-Two-Stage-D2-02: Cost-effective next-generation batteries for long-duration stationary storage (Batt4EU Partnership)	RIA	15.00	Around 5.00	3
Sustainable, secure and competitive energy supply				
HORIZON-CL5-2025-01-Two-Stage-D3-23: Critical elements for energy security of grid and storage technologies	RIA	9.00	Around 3.00	3
Overall indicative budget		24.00		
General conditions relating to this call				
Admissibility conditions	The conditions are described in General			

³³ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

³⁴ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

	Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Cluster 5 Call 02-2025 (WP 2025)

HORIZON-CL5-2025-02

Overview of this call³⁵

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ³⁶	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025				
Deadline(s): 02 Sep 2025				
Cross-sectoral solutions for the climate transition				

³⁵ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

³⁶ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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Climate, Energy and Mobility

HORIZON-CL5-2025-02-D2-03: Sustainable processing and refining of raw materials to produce battery grade Li-ion battery materials (Batt4EU Partnership)	IA	20.00	Around 10.00	2
HORIZON-CL5-2025-02-D2-06: Fostering the European battery ecosystem by providing accurate and up-to-date information and stimulating excellence in the European battery R&I community (Batt4EU Partnership)	CSA	3.00	Around 3.00	1
HORIZON-CL5-2025-02-D2-08: Coordinated call with India on waste to renewable hydrogen	RIA	10.00	Around 5.00	2
HORIZON-CL5-2025-02-D2-10: Clean Energy Transition Co-Funded Partnership	COFUND	69.00	Around 69.00	1
HORIZON-CL5-2025-02-D2-11: Support to the SET Plan community	CSA	7.50	Around 0.50	15
HORIZON-CL5-2025-02-D2-12: NZIA regulatory sandbox exchange forum support	CSA	0.50	Around 0.50	1
Sustainable, secure and competitive energy supply				
HORIZON-CL5-2025-02-D3-03: Novel approaches to geothermal resources development	IA	20.00	Around 10.00	2
HORIZON-CL5-2025-02-D3-04: Development of hydropower technologies and water management schemes allowing for win-win situation of flexible hydropower and biodiversity improvement – Societal Readiness Pilot	RIA	12.00	Around 4.00	3
HORIZON-CL5-2025-02-D3-06: Innovative manufacturing of wind energy technologies	IA	28.00	Around 7.00	4
HORIZON-CL5-2025-02-D3-09: Optimised/Alternative Silicon Growth Technologies (from either liquid or gaseous phase) for PV Applications (EUPI-PV Partnership)	IA	18.00	Around 9.00	2

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Climate, Energy and Mobility

HORIZON-CL5-2025-02-D3-11: Novel inverter technologies and flexibility in PV systems (EUPI-PV Partnership)	IA	18.00	Around 6.00	3
HORIZON-CL5-2025-02-D3-15: Building a Long-Term Africa Union (AU) and European Union (EU) Research and Innovation joint collaboration on Sustainable Renewable Energies	CSA	4.00	Around 4.00	1
HORIZON-CL5-2025-02-D3-16: Support to the BRIDGE initiative	CSA	1.00	Around 1.00	1
HORIZON-CL5-2025-02-D3-17: Control and operation tools for a RES-based energy system	IA	20.00	Around 10.00	2
HORIZON-CL5-2025-02-D3-21: Cross-regional network and market model for optimisation of long duration storage	IA	14.00	Around 7.00	2
HORIZON-CL5-2025-02-D3-25: Effects of CO ₂ -stream impurities on CO ₂ transport and storage	RIA	10.00	Around 5.00	2
HORIZON-CL5-2025-02-D3-26: European investment atlas of potential CO ₂ storage sites	RIA	5.00	Around 5.00	1
HORIZON-CL5-2025-02-D3-27: Using captured CO ₂ as a resource to replace fossil hydrocarbons in industrial production	IA	14.00	Around 7.00	2
Overall indicative budget		274.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex

	D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Cluster 5 Call 03-2025 (2-stage) (WP 2025)

HORIZON-CL5-2025-03-Two-Stage

Overview of this call³⁷

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ³⁸	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025				
Deadline(s): 04 Sep 2025 (First Stage), 14 Apr 2026 (Second Stage)				
Clean and competitive solutions for all transport modes				
HORIZON-CL5-2025-03-Two-Stage-D5-09: Next generation aircraft autonomy technologies for cockpit / pilot assistance applications	RIA	7.00	Around 3.50	2
Overall indicative budget		7.00		

³⁷ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

³⁸ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Cluster 5 Call 04-2025 (WP 2025)

HORIZON-CL5-2025-04

Overview of this call³⁹

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁴⁰	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025				

³⁹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁴⁰ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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Deadline(s): 04 Sep 2025				
Clean and competitive solutions for all transport modes				
HORIZON-CL5-2025-04-D5-01: Efficient wireless stationary bidirectional charging solutions for road Light Duty Vehicles (2ZERO Partnership) – Societal Readiness Pilot	IA	20.00	Around 10.00	2
HORIZON-CL5-2025-04-D5-02: Cybersecure and resilient road e-mobility ecosystem (2ZERO Partnership)	IA	10.00	Around 10.00	1
HORIZON-CL5-2025-04-D5-03: Safe post-crash management of road Light Duty Battery Electric Vehicles (BEVs) (2ZERO Partnership)	IA	5.00	Around 5.00	1
HORIZON-CL5-2025-04-D5-04: Extended lifetime of road Battery Electric Vehicles (BEV) (2ZERO Partnership)	RIA	7.00	Around 7.00	1
HORIZON-CL5-2025-04-D5-05: Road Battery Electric Vehicles (BEV) optimised user-centric solutions for energy efficiency design and consistent range throughout weather conditions (2ZERO Partnership)	IA	12.00	Around 6.00	2
HORIZON-CL5-2025-04-D5-06: Strategies, tools and concepts for optimised road Battery Electric Vehicles (BEV) long-haul logistics use cases (2ZERO Partnership)	IA	5.00	Around 5.00	1
HORIZON-CL5-2025-04-D5-07: Accelerating the circular transformation of the EU automotive industry	CSA	2.00	Around 2.00	1
HORIZON-CL5-2025-04-D5-08: Next generation testing capabilities in strategic EU wind tunnels	RIA	15.00	Around 15.00	1
HORIZON-CL5-2025-04-D5-10: Innovative solutions for energy conversion and safety of low and zero-carbon fuels in waterborne transport (ZEWT Partnership)	IA	22.50	Around 11.25	2
HORIZON-CL5-2025-04-D5-11: Demonstration of battery energy storage	IA	15.00	Around	2

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systems in existing and new vessels via novel energy storage and ship design concepts (ZEWT Partnership)			7.50	
HORIZON-CL5-2025-04-D5-12: Real-time, adaptative and innovative energy management solutions to optimise fuel consumption and lower emissions pollutants in waterborne transport (ZEWT Partnership)	RIA	4.00	Around 4.00	1
HORIZON-CL5-2025-04-D5-13: Novel holistic intelligent tools for variable retrofit and decarbonised scenarios (ZEWT Partnership)	IA	4.00	Around 4.00	1
HORIZON-CL5-2025-04-D5-14: Flexible and mobile solutions for Onshore Power Supply (ZEWT Partnership)	IA	5.00	Around 5.00	1
HORIZON-CL5-2025-04-D5-15: Optimal integrated onboard renewable energy solutions, by considering Wind-Assisted Propulsion Systems (ZEWT Partnership)	IA	7.50	Around 7.50	1
HORIZON-CL5-2025-04-D5-16: Support of the new EU renewable and low carbon fuel ecosystem for waterborne transport	CSA	2.00	Around 2.00	1
HORIZON-CL5-2025-04-D5-18: Support to the organisation and dissemination of the Transport Research Arena (TRA) conference	CSA	1.60	Around 1.60	1
HORIZON-CL5-2025-04-D5-19: Knowledge sharing and dissemination to support road transport R&I in EU and around the world increasing global EU competitiveness	CSA	2.00	Around 2.00	1
Safe, Resilient Transport and Smart Mobility services for passengers and goods				
HORIZON-CL5-2025-04-D6-01: Advancing remote operations to enable the sustainable and smart mobility of people and goods based on operational and societal needs (CCAM Partnership) – Societal Readiness Pilot	RIA	12.00	Around 6.00	2
HORIZON-CL5-2025-04-D6-02: Preparing for large-scale CCAM demonstrations (CCAM Partnership) – Societal Readiness Pilot	CSA	4.50	Around 4.50	1

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HORIZON-CL5-2025-04-D6-11: Innovative air mobility and services for sustainable and smart urban, peri-urban transport – Societal Readiness pilot	RIA	10.00	Around 5.00	2
HORIZON-CL5-2025-04-D6-12: Safe Human-Technology Interaction (HTI) in the vehicle systems of the coming decade – Societal Readiness Pilot	IA	8.00	Around 4.00	2
Overall indicative budget		174.10		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Cluster 5 Call 05-2025 (2-stage) (WP 2025)

HORIZON-CL5-2025-05-Two-Stage

Overview of this call⁴¹

Proposals are invited against the following Destinations and topic(s):

⁴¹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

Horizon Europe - Work Programme 2025
Climate, Energy and Mobility

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁴²	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025				
Deadline(s): 04 Sep 2025 (First Stage), 31 Mar 2026 (Second Stage)				
Climate sciences and responses for the transformation towards climate neutrality				
HORIZON-CL5-2025-05-Two-Stage-D1-05: Adaptation to Climate Change: Effectiveness and Limits	RIA	18.00	Around 6.00	3
Overall indicative budget		18.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

⁴² Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Call - Cluster 5 Call 06-2025 (WP 2025)

HORIZON-CL5-2025-06

Overview of this call⁴³

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁴⁴	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025 Deadline(s): 24 Sep 2025				
Climate sciences and responses for the transformation towards climate neutrality				
HORIZON-CL5-2025-06-D1-01: Climate simulations data and knowledge for optimal support of IPCC Assessments and International Policy	RIA	30.00	Around 30.00	1
HORIZON-CL5-2025-06-D1-02: Advancing Earth System Models to increase understanding of Earth system change	RIA	15.00	Around 7.50	2
HORIZON-CL5-2025-06-D1-03: Modelling of mitigation pathways for F-gases	RIA	7.50	2.50 to 3.00	3
HORIZON-CL5-2025-06-D1-04: The attribution to climate change, and improved forecasting of extreme and slow-onset climate- and weather-related events and their impacts	RIA	12.00	Around 6.00	2

⁴³ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁴⁴ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Horizon Europe - Work Programme 2025
Climate, Energy and Mobility

HORIZON-CL5-2025-06-D1-06: Fostering equity and justice in climate policies – Societal Readiness Pilot	RIA	15.00	4.00 to 5.00	3
HORIZON-CL5-2025-06-D1-07: Implementing the climate action pillar of the EU-African Union Partnership on Climate Change and Sustainable Energy	CSA	4.00	3.00 to 4.00	1
Cross-sectoral solutions for the climate transition				
HORIZON-CL5-2025-06-D2-07: Driving Urban Transitions to a sustainable future (DUT) Co-Funded Partnership	COFUND	56.00	Around 56.00	1
Overall indicative budget		139.50		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Cluster 5 Call 01-2026 (WP 2025)

HORIZON-CL5-2026-01

Overview of this call⁴⁵

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁴⁶	Indicative number of projects expected to be funded
		2025		
Opening: 16 Sep 2025 Deadline(s): 20 Jan 2026				
Cross-sectoral solutions for the climate transition				
HORIZON-CL5-2026-01-D2-01: Development of sustainable and design-to-cost batteries with (energy-)efficient manufacturing processes and based on advanced and safer materials (Batt4EU Partnership)	IA	24.00	Around 8.00	3
HORIZON-CL5-2026-01-D2-04: Integrating advanced materials, cell design and manufacturing development for high-performance batteries aimed at mobility (Batt4EU Partnership)	RIA	30.00	Around 10.00	3
HORIZON-CL5-2026-01-D2-05: Accelerated multi-physical and virtual testing for battery aging, reliability, and safety evaluation (Batt4EU Partnership)	IA	15.00	Around 7.50	2
HORIZON-CL5-2026-01-D2-09: Monitoring and Evaluation of the Societal Readiness Pilot	CSA	1.50	Around 1.50	1
Clean and competitive solutions for all transport modes				
HORIZON-CL5-2026-01-D5-17: Real time	IA	16.00	Around	2

⁴⁵ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁴⁶ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Horizon Europe - Work Programme 2025
Climate, Energy and Mobility

monitoring of regulated and non-regulated emissions from all types of vessels and other port activities in order to enforce emission limits in waterfront cities			8.00	
Safe, Resilient Transport and Smart Mobility services for passengers and goods				
HORIZON-CL5-2026-01-D6-03: Next-generation environment perception for real world CCAM operations: Error-free and secure technologies to improve energy-efficiency, cost-effectiveness, and circularity (CCAM Partnership)	RIA	8.00	Around 4.00	2
HORIZON-CL5-2026-01-D6-04: Integration of human driving behaviour in the validation of CCAM systems (CCAM Partnership)	RIA	5.00	Around 5.00	1
HORIZON-CL5-2026-01-D6-05: Approaches, verification and training for Edge-AI building blocks for CCAM Systems (CCAM Partnership)	RIA	4.00	Around 4.00	1
HORIZON-CL5-2026-01-D6-06: Federated CCAM data exchange platform (CCAM Partnership)	IA	4.00	Around 4.00	1
HORIZON-CL5-2026-01-D6-07: Innovative construction and maintenance, with the use of new materials and techniques, for resilient and sustainable transport infrastructure	IA	22.00	Around 11.00	2
HORIZON-CL5-2026-01-D6-08: Accelerating freight transport and logistics digital innovation	IA	15.00	7.00 to 8.00	2
HORIZON-CL5-2026-01-D6-09: Reliable data and practices to measure and calculate transport emissions in multimodal transport chains	CSA	3.50	Around 3.50	1
HORIZON-CL5-2026-01-D6-10: Integrating inland waterway transport in smart shipping and multimodal logistics chains	IA	16.00	Around 8.00	2
HORIZON-CL5-2026-01-D6-13: Safety of Cyclists, Pedestrians and Users of	RIA	10.00	Around 5.00	2

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Micromobility Devices				
HORIZON-CL5-2026-01-D6-14: Predicting and avoiding road crashes based on Artificial Intelligence (AI) and big data	RIA	10.00	Around 5.00	2
HORIZON-CL5-2026-01-D6-15: Icing in the context of sustainable aviation	RIA	4.00	Around 4.00	1
Overall indicative budget		188.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Cluster 5 Call 02-2026 (WP 2025)

HORIZON-CL5-2026-02

Overview of this call⁴⁷

Proposals are invited against the following Destinations and topic(s):

⁴⁷ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

Horizon Europe - Work Programme 2025
Climate, Energy and Mobility

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁴⁸	Indicative number of projects expected to be funded
		2025		
Opening: 16 Sep 2025				
Deadline(s): 17 Feb 2026				
Sustainable, secure and competitive energy supply				
HORIZON-CL5-2026-02-D3-01: Large-scale production of liquid advanced biofuels and renewable fuels of non-biological origin	IA	33.00	Around 11.00	3
HORIZON-CL5-2026-02-D3-02: Competitiveness, energy security and integration aspects of advanced biofuels and renewable fuels of non-biological origin value chains	RIA	8.00	Around 4.00	2
HORIZON-CL5-2026-02-D3-05: Demonstration of thermal energy storage solutions for solar thermal plants and systems	IA	15.00	Around 7.50	2
HORIZON-CL5-2026-02-D3-07: Improved reliability and optimised operations and maintenance for wind energy systems	RIA	15.00	Around 5.00	3
HORIZON-CL5-2026-02-D3-08: Understand and minimise the environmental impacts of offshore wind energy	RIA	15.00	Around 5.00	3
HORIZON-CL5-2026-02-D3-10: Towards commercialisation of Perovskite PV and development of dedicated manufacturing equipment (EUPI-PV Partnership)	IA	24.00	Around 8.00	3
HORIZON-CL5-2026-02-D3-12: Extending the lifetime of crystalline silicon PV modules (EUPI-PV Partnership)	RIA	8.00	Around 4.00	2

⁴⁸ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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HORIZON-CL5-2026-02-D3-13: De-risking wave energy technology development through transnational pre-commercial procurement of wave energy research and development	PCP	20.00	Around 20.00	1
HORIZON-CL5-2026-02-D3-14: Development of innovative solutions strengthening the security of renewable energy value chains	CSA	6.00	Around 2.00	3
HORIZON-CL5-2026-02-D3-18: Next generation distribution substation for increasing the system resilience	IA	18.00	Around 9.00	2
HORIZON-CL5-2026-02-D3-19: Innovative solutions for a generative AI-powered digital spine of the EU energy system	IA	16.00	Around 8.00	2
HORIZON-CL5-2026-02-D3-20: Innovative tools and services to manage and empower energy communities	IA	20.00	Around 10.00	2
HORIZON-CL5-2026-02-D3-22: Underground Thermal Energy Storage in dense urban areas	IA	18.00	Around 9.00	2
HORIZON-CL5-2026-02-D3-24: New CO2 capture technologies	RIA	18.00	Around 6.00	3
Efficient, sustainable and inclusive energy use				
HORIZON-CL5-2026-02-D4-01: On-site innovative robotic and automated solutions and techniques for more sustainable and less disruptive building renovation and construction	RIA	15.00	Around 5.00	3
HORIZON-CL5-2026-02-D4-02: Smarter buildings as part of the energy system for increased efficiency and flexibility – Societal Readiness Pilot	IA	12.00	Around 4.00	3
HORIZON-CL5-2026-02-D4-03: Innovative pathways for low carbon and climate resilient building stock and built environment (Built4People Partnership)	RIA	15.00	Around 5.00	3
HORIZON-CL5-2026-02-D4-04: Innovative approaches for the deployment of Positive	IA	15.00	Around 5.00	3

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Energy Districts				
HORIZON-CL5-2026-02-D4-05: Optimal combination of low embodied carbon construction products, technical building systems and circularity principles for climate neutral buildings (Built4People Partnership)	RIA	12.00	Around 4.00	3
HORIZON-CL5-2026-02-D4-06: Phase out fossil fuel in energy intensive industries through the efficient integration of renewable energy sources	IA	15.00	Around 7.50	2
Overall indicative budget		318.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Destinations

Climate sciences and responses for the transformation towards climate neutrality

This Destination contributes directly to the Strategic Plan's **Key Strategic Orientations** 'Green transition', 'Digital transition' and 'A more resilient, competitive, inclusive and democratic Europe'.

In line with the Strategic Plan, the overall **expected impact** of this Destination is to contribute to the "*Advancing science for a transition to a climate-neutral and resilient society*".

Advancing climate science and the knowledge base necessary to underpin actionable solutions is essential for catalysing the global transition to a climate-neutral and climate-resilient society. Evidence on research gaps of high policy relevance can be found in the European Climate Risk Assessment (EUCRA)⁴⁹, and in the report "The Next frontier for Climate Change Science"⁵⁰.

Research should contribute to closing major knowledge gaps on the changing climate together with their associated impacts and risks, on both society and nature, and to developing tools to support decision-makers in designing and implementing effective mitigation and adaptation actions at various time and spatial scales while properly accounting for synergies and trade-offs with other policy objectives, such as biodiversity, industrial competitiveness, just transition and leaving no one behind. Notably, state-of-art scientific evidence will be increasingly vital to guide policy decisions aimed at safeguarding long-term societal welfare and EU's economic resilience as climate change impacts increase. Tailored scientific approaches that take into account disparities between regions, countries, communities and diverse groups within society, are needed, to understand how they are affected by global warming and what array of response options is available to them.

The first objective is to **support and accelerate climate action (both mitigation and adaptation) globally** by:

- Improved knowledge of the Earth system, its recent evolution and future responses under different global emissions pathways and socio-economic scenarios;
- Increased understanding of the interrelated impacts between climate change, human and natural systems, including from compound, cascading and tail risks, improving the attribution to anthropogenic factors, and leveraging the role of climate services for effective adaptation and response strategies;
- Well-designed and evaluated solutions and pathways for climate-resilient, low-greenhouse-__gas-emission development enabling just societal transformation while

⁴⁹ European Climate Risk Assessment — European Environment Agency (europa.eu)

⁵⁰ [The Next Frontier for Climate Change Science: Insights from authors of the IPCC 6th Assessment Report on knowledge gaps and priorities for research](#)

promoting citizen and stakeholder involvement, climate literacy and integration of natural and social sciences;

- Increased synergies with the EU Mission on Adaptation to Climate Change, by generating actionable knowledge in support of transformative adaptation.

The second objective contributes substantially to key international assessments by closing key knowledge gaps related to climate change. Such assessments include the ones by the Intergovernmental Panel on Climate Change (IPCC), the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), the Scientific Assessment of Ozone Depletion and initiatives such as the Coupled Model Intercomparison Project (CMIP) and the Coordinated Regional Climate Downscaling Experiment (CORDEX) under the World Climate Research Programme (WCRP).

The third objective is a **strengthened European Research Area on climate change** by boosting scientific excellence and capacity in an inclusive manner across the participating countries.

The fourth objective is the **maximisation of synergies with other policy priorities** such as biodiversity and ecosystem preservation and restoration, just transition, just resilience, pollution reduction, health and well-being, resource conservation, circularity, and the Sustainable Development Goals by exploring co-benefits, trade-offs and potential unintended consequences of climate strategies and policy interventions.

Strong links exist with activities funded under Cluster 6 on climate-ocean-polar-cryosphere nexus, and in Cluster 3 on disaster risk reduction, and with the Mission on Adaptation to Climate Change. The results of research funded under this Destination, in particular those informing the design of effective mitigation and adaptation pathways, are also highly relevant for other EU Missions on Climate-Neutral and Smart Cities, on Soil, and on Ocean and Water.

Proposals are invited against the following topic(s):

HORIZON-CL5-2025-06-D1-01: Climate simulations data and knowledge for optimal support of IPCC Assessments and International Policy

Call: Cluster 5 Call 06-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 30.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.

<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. This support can be provided in the form of grants to researchers from the Global South countries⁵¹. The maximum amount to be granted to an individual third party is EUR 60.000.</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁵².</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: Open access to any new modules, models or tools developed from scratch or substantially improved with the use of EU funding under the action must be ensured through documentation, availability of model code and input data developed under the action.</p>

Expected Outcome: Project results are expected to contribute to **all of the** following expected outcomes:

- The institutions in charge of generating the relevant information for decision makers can access and utilise in a timely manner scientifically robust climate projections corresponding to a range of future scenarios and their corresponding greenhouse gas emission pathways, including scenarios matching the Paris Agreement targets;
- Decision makers and society can better understand the impacts, risks and implications of pathways involving different magnitudes and durations of temperature overshoot;
- The European research community provides a coordinated contribution to the IPCC and other major scientific initiatives (e.g., IPBES, WCRP, World Adaptation Science Programme (WASP), the Global Carbon Budget), in support of informing the UNFCCC process and other global, European and national climate efforts;
- The activities of international programmes and communities like the Integrated Assessment Modelling Consortium (IAMC), the CMIP, the CORDEX and Inter-Sectoral

⁵¹ In absence of a single formal definition of the Global South, the list of low- to middle-income countries automatically eligible for Horizon Europe funding should be used for this purpose – see the [Horizon Europe List of Participating Countries](#) on EU Funding and Tenders Portal for up-to-date information.

⁵² This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Impact Model Intercomparison Project (ISIMIP) are better coordinated between each other, with outcomes more consistent and responding to policy needs better and in a timelier manner;

- The European contribution to these programmes is supported by an improved and interconnected overarching infrastructure.

Scope: Given the rapidly developing climate crisis, there is an increasing need for accurate, reliable, and actionable information at global to local spatial scales, and near to long timescales. This information supports a range of requirements, including policy related ones. In particular, simulations and knowledge delivered that feed into the IPCC, including the Seventh Assessment Report (AR7) and later ones, should be internally coherent and well-coordinated. The modelling, setting, ensemble, and simulation design should be suited to meet societal and policy demands to support timelier European and international climate policy developments. This also implies progressing towards an operational framework to provide the best possible information for societal decision-making that brings together available approaches. The resulting simulations and analysis should sample the full spectrum of climate risks. In particular, as global mitigation efforts are presently insufficient and temperatures continue to rise, the impacts of global warming overshoot on the Earth system and the feasibility, possible pace, and implications of bringing global temperatures down in a sustainable way after an overshoot need to be explored. This analysis should also consider the risks and consequences of potential abrupt and irreversible impacts (e.g., sea level rise, changes in ocean circulation, ocean-acidification, water cycle alterations, soil alterations, aridification, species extinctions, loss of sea ice, glaciers, and ice sheets, and crossing climate and ecological tipping points).

Therefore, actions should address all of the following aspects:

- Generate future global climate projections with state-of-the-art Earth System Models (ESM) which are built on the latest improvements in modelling technologies and in process understanding with a more complete representation of climate-carbon cycle feedback;
- Design climate simulations considering the socio-economic scenarios from the most up to date set of Integrated Assessment Models (IAM). Greenhouse gas emission pathways should be provided based on various societal mitigation and adaptation choices and land-use scenarios. Climate feedback should be also considered. The resulting assessment should link allowable carbon emissions with key climate targets, spanning policy relevant temporal and spatial scales;
- Deliver scenarios and simulations with different levels and durations of warming overshoot (to be selected for their policy relevance), assessing the corresponding risks accounting for fast and slow onset processes and the feasibility and limits of carbon dioxide removal methodologies;

- Update and coordinate the assumptions as well as the observational and simulated climate data sets underpinning the models and experiments of the various climate science communities (including Earth system, sectoral impacts, adaptation, and mitigation modellers) across international programmes, such as IAMC, CMIP, CORDEX and ISIMIP, optimising the interaction between them as much as possible within the same IPCC cycle;
- Design a framework to coordinate and incorporate the suite of global and regional climate projections, encompassing the range of available model resolutions and model realism, using consistent concentration and emission-driven ESMs, enhancing collaboration between European Earth system modelling and service provision, such as Copernicus and Destination Earth. This system should include cross-analysis and evaluation of the full suite of models, including approaches for sampling projection and scenario uncertainty (e.g., emulators). The framework should also make the modelling results more accessible and understandable to the practitioners and decision makers;
- Improve the existing infrastructure landscape (software, tools, data, adaptation of models to High-Performance Computing (HPC)), to support the delivery of global and regional climate projections and associated analysis (for which a part of the budget may be allocated, but not more than 30% of the total eligible costs). This should be complementary to efforts funded through the European Research Infrastructures, Euro-HPC Joint Undertaking, Digital Europe Programme and other sources. ESM simulations are intended as the core of the topic with links to other modelling activities. To maximise the policy relevance of the climate simulations delivered, the operationalisation framework and the scenarios should be developed in co-creation with policy makers (e.g., through advisory boards or other participatory procedures).

When dealing with models, actions should promote the highest standards of transparency and openness, as much as possible going well beyond documentation and extending to aspects such as assumptions, protocols, code, and data that is managed in compliance with the FAIR principles⁵³.

They should envisage clustering activities with any other relevant projects (in⁵⁴ and outside of Horizon Europe) for cross-projects cooperation and exchange of results. Proposals should earmark the necessary resources for these purposes. As this endeavour should be supported by the research communities that continuously improve the modelling systems and related infrastructure, strong interaction and coordination is expected with the projects funded under previous calls of this Destination and other relevant projects on ESM, with the topic HORIZON-CL5-2025-03-D1-02 “Advancing Earth System Models to increase understanding of Earth system change”, and with the topic HORIZON-INFRA-2025-01-SERV-02 (area on Research infrastructure services to improve the understanding and prediction of future climate changes and its impacts).

⁵³ FAIR (Findable, Accessible, Interoperable, Reusable).

⁵⁴ For example, relevant projects funded under the Horizon Europe calls Climate sciences and responses.

International cooperation is encouraged, in particular with the Global South⁵⁵, to promote capacity and consensus building, for example, by training early career researchers from Global South countries (see specific conditions for financial support to third parties). Maximum total amount dedicated to these activities should not exceed EUR 1.000.000.

HORIZON-CL5-2025-06-D1-02: Advancing Earth System Models to increase understanding of Earth system change

Call: Cluster 5 Call 06-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁵⁶ Beneficiaries will be subject to the following additional obligations regarding open science practices: Open access to any new modules, models or tools developed from scratch or substantially improved with the use of EU funding under the action must be ensured through documentation, availability of model code and input data developed

⁵⁵ In absence of a single formal definition of the Global South, the list of low - to middle- income countries automatically eligible for Horizon Europe funding should be used for this purpose – see the [Horizon Europe List of Participating Countries](#) on EU Funding and Tenders Portal for up-to-date information

⁵⁶ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

	under the action.
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Expected Outcome: Project results are expected to contribute to **all of the** following expected outcomes:

- Advanced understanding and capability to predict the future evolution of the Earth system, at global to local spatial scales and from weather to climate timescales, including the socio-economic and environmental impacts of these changes;
- Advanced understanding and capability to predict regional climate variability, including extreme events and regional water cycle, in particular, regional precipitation;
- Strengthened collaboration and cross-fertilisation across available approaches to Earth system and climate modelling science, enabling a joint contribution to the next generation of Earth system models (ESMs);
- Long-term science, modelling and evidence base to support European and international policies are advanced.

Scope: ESMs are the primary tools used for assessing future changes in the climate system. They have increased in their resolution and realism over the past two decades. Despite these advances, there remain several poorly understood and simulated processes, interactions and feedbacks that limit their ability to deliver accurate predictions and projections of global and regional Earth system change, and to aid understanding and quantifying future climate variability. Specially challenging is how variability interacts with extreme events (including compound ones), in particular related to precipitation and water availability (both excess and scarcity).

Actions should address all of the following aspects:

1. Improving the simulation of the coupled Earth system and its sensitivity to natural and anthropogenic forcings, with a better representation of key Earth system and climate feedbacks and processes, including, among others, one or more of the following advances⁵⁷:
 - o The interplay between global change, regional climate variability, and changes in climate and weather extremes;
 - o Terrestrial-ocean-climate interactions;
 - o Coupled climate-carbon-water cycle feedbacks;
 - o Coupled climate-ocean-ice interactions;
 - o Aerosol-cloud-climate forcing and feedback;

⁵⁷ The evaluation will be based on the standard Horizon Europe evaluation criteria, regardless of the number of the aspects covered.

- o Climate-vegetation-fire interactions;
 - o Climate-air quality interactions;
 - o Interactions between land use scenarios (in terms of changes in the land use and surface, such as those related to carbon dioxide removal, with consequences on the water and carbon cycles, albedo and aerosols) and regional climate.
2. Increased collaboration across different model development approaches encompassing the range of available model resolutions and model realism.
 3. Bring together and further improve existing and new observational and reanalysis datasets, models, emulators, and analysis tools to facilitate rapid and in-depth bias identification, model calibration and validation, and evaluation and understanding of model simulations.

Actions should exploit the opportunities offered by state of art digital technologies such as machine learning, big data analytics or Artificial Intelligence (AI). They should promote the highest standards of transparency and openness, extending to aspects such as assumptions, protocols, code, and data that is managed in compliance with the FAIR principles⁵⁸. Beneficiaries of EU funding are required to publish results data in open access repositories and/or as annexes to publications, and provide full openness of any new modules, models or tools developed from scratch or substantially improved. Projects should take into account, during their lifetime, relevant activities and initiatives for ensuring and improving the quality of scientific software and code.

All projects funded under this topic are strongly encouraged to connect, coordinate, and participate in networking, intercomparison and joint activities to exploit synergies and maximise complementarities between them. They should envisage clustering activities with any other relevant projects (in⁵⁹ and outside of Horizon Europe) for cross-projects cooperation and exchange of results. Proposals should earmark the necessary resources for these purposes. Results from relevant past and ongoing projects from previous calls of this Destination and other relevant projects on ESM should be considered and strong feedback and coordination with projects funded under the topics HORIZON-CL5-2025-06-D1-01 “Climate simulations data and knowledge for optimal support of IPCC Assessments and International Policy” and HORIZON-INFRA-2025-01-SERV-02 (area on research infrastructure services to improve the understanding and prediction of future climate changes and their impact) is expected.

International cooperation is encouraged, in particular with the Global South⁶⁰, to promote capacity and consensus building, for example, by training early career researchers.

⁵⁸ FAIR (Findable, Accessible, Interoperable, Reusable).

⁵⁹ For example, relevant projects funded under the Horizon Europe calls Climate sciences and responses.

⁶⁰ In absence of a single formal definition of the Global South, the list of low- to middle-income countries automatically eligible for Horizon Europe funding should be used for this purpose – see the [Horizon Europe List of Participating Countries](#) on EU Funding and Tenders Portal for up-to-date information

HORIZON-CL5-2025-06-D1-03: Modelling of mitigation pathways for F-gases

Call: Cluster 5 Call 06-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 2.50 and 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁶¹</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: Open access to any new modules, models or tools developed from scratch or substantially improved with the use of EU funding under the action must be ensured through documentation, availability of model code and input data developed under the action.</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Improved knowledge of regional pathways concerning the use of Ozone Depleting Substances and Fluorinated greenhouse gases (F-gases), options to mitigate this use, the resulting emissions, and how this interacts with the decarbonisation of the energy system;
- Improved modelling capacity regarding the use of Ozone Depleting Substances and F-gases in the refrigeration, air conditioning and heat pump sectors, in a manner that increases the availability to Parties to the Montreal Protocol⁶² of modelling tools to

⁶¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁶² [Montreal Protocol on Substances that Deplete the Ozone Layer](#)

inform them on policy options for an ambitious implementation of the Kigali Agreement⁶³, including a transition to natural refrigerants, and how this interacts with the decarbonisation of the energy system.

Scope: F-gases are the fastest growing group of greenhouse gas emissions globally. The Montreal Protocol resulted in decreasing use and emissions of Ozone Depleting Substances and will now also regulate a phasedown of hydrofluorocarbons (HFCs), representing the largest share of F-gas use, of which the majority is used in refrigeration, air conditioning and heat pump equipment.

The project should improve the knowledge base of F-gas use and emission pathways under baseline conditions (i.e., policies as they are today), pathways that meet the Kigali Agreement and pathways that outperform the Kigali Agreement. The development of these pathways should also include fluorinated greenhouse gases not regulated under the Montreal Protocol, in particular those covered by the Regulation (EU) 2024/573 on fluorinated greenhouse gases⁶⁴. It should cover all main regions globally separating at least the countries that fall under Article 5 of the Montreal Protocol and those that do not, and preferably further disaggregating them within these two classes, taking into account for instance climate conditions. The development should assess the interaction with the energy system, notably related to the deployment of HFC-alternatives in refrigeration, air conditioning and heat pump equipment and its impact on energy efficiency, the deployment of sulphur hexafluoride (SF₆) or its alternatives in electrical switch-gear. Possible impacts on emissions of per- and polyfluoroalkyl substances (PFAS) should be considered. The pathways should give detailed insights into the technologies available, including the use of F-gases-free alternatives.

Most F-gas emissions are related to the use in the refrigeration, air conditioning and heat pump (RACHP) equipment. This sector is projected to be one of the highest contributors to future global energy demand increases. The action should include the development of modelling tools that allow for the representation at national level of the use of F-gases and their alternatives at least in this RACHP sector, with a view to develop tools that would allow parties to the Montreal Protocol to assess at national level different options of mitigating HFC use, and the interaction with the decarbonisation of the energy system. The action should thus expand and improve the number of tools that can provide such detailed information at country level, including for the so called Article 5 Parties under the Montreal Protocol, in a manner that would improve the knowledge base for parties to implement specifically the Kigali Agreement to the Montreal Protocol as well as allow them to get insights in how to create synergies with the climate mitigation goals of the Paris Agreement, including the decarbonisation of the energy system.

⁶³ [The Kigali Amendment \(2016\): The amendment to the Montreal Protocol agreed by the Twenty-Eighth Meeting of the Parties \(Kigali, 10-15 October 2016\) | Ozone Secretariat \(unep.org\)](#)

⁶⁴ [Regulation - EU - 2024/573 - EN - EUR-Lex \(europa.eu\)](#)

All research outputs should be managed according to the FAIR principles⁶⁵. Beyond open access to scientific publications and research data, open access to software, models, algorithms, workflows and protocols, cell lines, compounds, etc. is required.

All projects funded under this topic are strongly encouraged to connect, coordinate, and participate in networking, intercomparison and joint activities to exploit synergies and maximise complementarities. Activities on energy efficiency of equipment, on electricity grids or the safe use of chemicals would be of specific interest in this context. Projects should also envisage clustering activities with any other relevant projects (in and outside of Horizon Europe) for cross-projects cooperation and exchange of results. Proposals should earmark the necessary resources for these purposes.

HORIZON-CL5-2025-06-D1-04: The attribution to climate change, and improved forecasting of extreme and slow-onset climate- and weather-related events and their impacts

Call: Cluster 5 Call 06-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁶⁶</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: Open access to any new modules, models or tools developed from scratch or substantially improved with the use of EU funding under the action must be ensured through</p>

⁶⁵ FAIR (Findable, Accessible, Interoperable, Reusable).

⁶⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

	documentation, availability of model code and input data developed under the action.
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Advanced understanding of the causality between anthropogenic climate change and the frequency and intensity of climate and weather extremes (including temperature extremes, heavy precipitation and pluvial floods, river floods, droughts, storms, as well as compound events), and their risks and impacts, including cascading impacts, on human systems and ecosystems;
- Improved methodologies and tools of attribution of extreme climate- and weather-related events, and their impacts, to anthropogenic climate change;
- Enhancement of existing or creation of new pilot global databases of extreme events, impacts and their attribution;
- Advanced knowledge of how attribution science and forecasting can be operationalised for a range of policy purposes, including informing and improving preparedness, civil protection and humanitarian planning for future extreme and slow-onset events, post-disaster reconstruction, resilience and adaptation plans.

Scope: Anthropogenic climate change influences the intensity and likelihood of extreme weather events – the latest IPCC report warns that anthropogenic climate is already affecting weather and climate extremes across the globe and with every additional increment of global warming, changes in extremes will continue to become larger.

Attribution science tries to answer the question of what the role of anthropogenic climate change relative to other drivers (natural and non-climate anthropogenic factors), is for a given extreme climate or weather event. It is relatively nascent, and while it is fast advancing, numerous gaps remain, including on compound and cascading events, the interplay between slow and fast onset events, the appropriate statistical methods and the proper consideration of various degrees of vulnerabilities and exposure.

Some tail events, risks and associated impacts are inherently poorly represented in current simulation records. The latest advances in numerical modelling, AI and Machine Learning, counter-factual datasets using large ensembles and digital twins, for example, could increase the sample size of simulated rare – including compound and cascading - events and offer opportunities to explore the decision-making and estimated impact space (e.g., in relation to water, air pollution, ecosystem status, land use – and their combination). Propagating uncertainties along the causality chain is an important aspect to address in this context.

Actions should address all of the following aspects:

- Advance attribution science through a combination of observations, models, attribution methodologies applied to the physical climate conditions (fast and slow-onset event

attribution for a more accurate estimation of how the likelihood and intensity of the hazards have been altered by anthropogenic climate change) and impacts (identifying how the interplay between anthropogenic climate change and local implemented responses affects residual impacts);

- Advance the understanding of the interplay between natural variability and anthropogenic climate change both in the recent past (since the instrumental data is available) and in the near- and mid- term future (2025-2060), as well as the interplay between climate and non-climate drivers of impacts, and socially differentiated vulnerability patterns;
- Advance methodologies to collect diverse in-situ and remote sensing observations to develop or contribute to robust extreme event and impact databases;
- In the context of attribution, focus on extreme and slow-onset events and their interactions (including cascading and compound events) and impacts (on human systems and ecosystems), locally implemented responses and their limits (response capacities), with due consideration of vulnerable regions;
- Deliver enhanced methods to separate the effects of climate trends (including in extreme events) from trends in exposure and vulnerability, both in observed datasets and in model scenarios;
- Investigate how different model enhancements (e.g., finer resolution, increased complexity) impact the realism and accuracy of the modelled climate and weather extremes. Strive to investigate inter-model differences and their implications for extreme event attribution and contribute to multi-model and intercomparison approaches (e.g., Inter-Sectoral Impact Model Intercomparison Project, ISIMIP), including with downscaling and bias correction of global models for better simulation of extreme events;
- Building on latest advances in attribution studies, improve forecasting of extreme climate- and weather-related events and their impacts, and contribute to the evolution of climate services;
- Improve the knowledge of how to operationalise the attribution science and forecasting for informing future planning including in some of the areas relevant for advancing disaster preparedness and prevention capacity building, humanitarian aid operations, and adaptation plans (e.g., early warning systems, disaster risk reduction including with nature-based solutions, emergency relief) via co-design and co-production with operational actors, including citizens and civil society globally and with due consideration of associated challenges in the Global South;
- The results should serve as a basis to ensure policies and actions that follow from the attribution studies can integrate climate justice.

When dealing with models, actions should promote the highest standards of transparency and openness, as much as possible going well beyond documentation and extending to aspects such as assumptions, protocols, code, and data that is managed in compliance with the FAIR principles⁶⁷.

All projects funded under this topic are strongly encouraged to connect, coordinate, and participate in networking and joint activities together, as appropriate. Collaboration with Destination Earth is encouraged. Clustering activities with other relevant ongoing projects (in and out of Horizon Europe) should be envisaged for cross-projects cooperation and results from relevant past and ongoing projects, including XAIDA⁶⁸ and CLINT⁶⁹, should be considered.

This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities. Citizen Science and other innovative and participatory forms of research could be appropriate for this action.

International cooperation is encouraged, in particular with the Global South⁷⁰ in the context of scientific capacity building, disaster risk reduction and strengthening of climate resilience.

HORIZON-CL5-2025-05-Two-Stage-D1-05: Adaptation to Climate Change: Effectiveness and Limits

Call: Cluster 5 Call 05-2025 (2-stage) (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of</p>

⁶⁷ FAIR (Findable, Accessible, Interoperable, Reusable).

⁶⁸ <https://cordis.europa.eu/project/id/101003469>

⁶⁹ <https://cordis.europa.eu/project/id/101003876>

⁷⁰ In absence of a single formal definition of the Global South, the list of low- to middle-income countries automatically eligible for Horizon Europe funding should be used for this purpose – see the [Horizon Europe List of Participating Countries](#) on EU Funding and Tenders Portal for up-to-date information

	Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Grants awarded under this topic will be linked between them by means of a collaboration agreement and will have to submit the following deliverables: (i) A joint action plan (between months 6 and 12), produced in collaboration between the projects funded under this topic; and (ii) A common part of the methodology (not later than month 24), produced and agreed by the projects funded under this topic.</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Adaptation communities - from researchers to practitioners, citizens and decision makers - have an improved understanding of the factors driving climate change adaptation limits⁷¹ and effectiveness⁷²;
- Policy makers can select and prioritise adaptation strategies to design adaptation policies from improved and more consistent comparability of adaptation options and outcomes;
- The limits and effectiveness of adaptation strategies are evaluated by a comprehensive, multidimensional set of criteria within a standardised methodology, thus contributing to the work of the IPCC. A scientific contribution for updating the 1994 IPCC Technical Guidelines on impacts and adaptation is provided;
- Practitioners and decision makers at all relevant levels of governance (local, national, regional, and European) are provided with a consistent framework and tools for monitoring, evaluation, and adjustment of their adaptation strategies, both in the short term (for more effective disaster prevention and preparedness) and in the long term (for more effective transformative and climate resilient adaptation pathways).

Scope: The effectiveness of climate change adaptation measures depends, among other factors, on the magnitude and rate of warming, which can lead to context-specific hard limits being encountered. However, the scientific evidence related to adaptation effectiveness remains limited, and providing a universal definition of what constitutes effective adaptation is challenging. This is motivated by difficulties in defining baseline conditions given the dynamic nature of the adaptation, in measuring avoided impacts and in establishing causality. Other problems arise from the long lead time until responses show outcomes, and limited

⁷¹ Adaptation limits: The point at which an actor's objectives (or system needs) cannot be secured from intolerable risks through adaptive actions. Hard adaptation limit – No adaptive actions are possible to avoid intolerable risks. Soft adaptation limit – Options may exist but are currently not available to avoid intolerable risks through adaptive action.

⁷² Effectiveness: refers to the extent to which an action reduces vulnerability and climate-related risk, increases resilience, and avoids maladaptation (IPCC, 2022).

understanding of trade-offs across spatial scales, community systems and sectors, which limits the application of a system approach, essential for this analysis. Ex-ante and ex-post monitoring and evaluation of adaptation at different timelines and scales is also critical but currently scarcely implemented. It is urgent to better understand and assess adaptation effectiveness and limits to increase adaptive capacity, resilience against extreme, and slow onset, non-extreme events, and to reduce vulnerability and exposure.

The actions should generate assessments of the effectiveness and limits of adaptation options based on quantitative and qualitative evidence (privileging scientific literature but systematically integrating insights from grey literature and including diverse group's perspectives and knowledge), methodologically sound (replicable and with new metrics and indicators informed with uncertainty) and comprehensive in the criteria considered (such as economic, technological, legal, institutional, socio-cultural, geophysical, environmental and cross-cutting aspects that determine soft limits). Cross-cutting criteria to be included are the contribution of the adaptation solutions to mitigation, their ability to reduce cascading, compound effects and risks transmission, the degree of use of nature-based solutions (NBS), together with the feasibility, the ambition level, and their contribution to equity and justice. Other relevant aspects that should be considered are the exogenous factors, the gender, age and intersectional dimensions, the governance and the barriers and enablers.

Actions should evaluate adaptation effectiveness and limits as a function of time and for a comprehensive range of warming rates, considering the changing variability patterns. Projects should address all of the following aspects:

- Further the understanding of the general and context specific (e.g., regional, sectoral, etc.) drivers of adaptation effectiveness and limits, including vulnerability;
- Develop a robust methodology to assess the effectiveness and limits of adaptation options in a consistent way, assuring comparability among assessments. Such a methodology should:
 - o Synthesise different sources of observational (both quantitative and qualitative evidence) and modelling data that are relevant at the regional, local or sectoral levels to assess multiple dimensions of effectiveness and adaptation limits over time;
 - o Have sufficient common core elements to ensure consistency and comparability among regions and sectors, and sufficient flexibility to reflect their contextual specificities;
 - o Include a comprehensive set of measurements and indicators and approaches to characterise adaptation as a process and assess quantitatively and qualitatively the multiple dimensions and aspects of adaptation effectiveness and limits (both hard and soft);

- o Explore the optimal balance between standardisation and the context specific elements of the methodology.
- Test and apply the methodology for the following purposes:
 - o To evaluate the effectiveness of advanced and short-term planned adaptation strategies, for a variety of European (EU Member States and Horizon Europe Associated Countries) environmental and socio-economic sectors, conditions or regions (a minimum of 6 study cases is recommended). Collaboration with the EU Mission on Adaptation to Climate Change is strongly encouraged, for example, in the test cases;
 - o To inform the timeline and likelihood of emergence of context-specific (i.e., regions and sectors) limits to adaptation in a warming world, with an emphasis on societal, climate and biodiversity hotspots.
- Synthesising the results as usable knowledge for practitioners and decision makers and communicating and disseminating them using existing platforms (e.g., expanding the Climate-ADAPT platform of the European Environment Agency or other options).

While joint work will not occur at proposal stage, the common core of the methodology should be jointly developed by all the projects funded under this topic by combining their respective proposal's approaches, to ensure overall consistency. For assuring this, proposals should include a draft plan for joint actions, to be then adapted and agreed between all funded projects. Therefore, all proposals must include a deliverable preferably for month 6 (not later than month 12) that contains the agreed joint action plan. Proposals should dedicate specific tasks and resources, setting aside an adequate budget (in the range of 15 to 25% of their total eligible budget) to collaborate with other projects funded under this topic on developing the common core of the methodology. As a result, this core part should be also a joint deliverable for not later than month 24. Then, the methodology should be separately extended by individual projects to address EU regional and sectoral contexts (e.g., by specific modules) maintaining consistency with the core part. It should build on existing data and approaches, such as those proposed by Copernicus, GAMI⁷³, EUCRA⁷⁴, WASP⁷⁵ and other relevant sources. Aspects such as sectorial and geographical coverage of the real-world case studies are left to the proposals to decide, provided they demonstrate a wide variety of existing or new adaptation options in Europe.

Actions should promote the highest standards of transparency and openness and be managed in compliance with the FAIR principles⁷⁶.

This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of

⁷³ <https://globaladaptation.github.io/>

⁷⁴ <https://www.eea.europa.eu/publications/european-climate-risk-assessment>

⁷⁵ For example, Least Developed Countries Fund (LDCF), Special Climate Change Fund (SCCF), Global Climate Facility (GCF), Adaptation Fund (AF).

⁷⁶ FAIR (Findable, Accessible, Interoperable, Reusable).

relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

In addition, the projects funded under this call should envisage clustering activities with other relevant ongoing projects, in and outside of Horizon Europe, for cross-projects cooperation and exchange of results, and build on projects funded under previous calls of this Destination related to adaptation. Projects funded are also strongly encouraged to participate in the Mission Community of Practice of the Mission Climate Adaptation⁷⁷.

HORIZON-CL5-2025-06-D1-06: Fostering equity and justice in climate policies – Societal Readiness Pilot

Call: Cluster 5 Call 06-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 and 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The consortium must include as beneficiary or associated partner at least three independent legal entities established in three different low or middle-income countries ⁷⁸ .
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training

⁷⁷ <https://climate-adapt.eea.europa.eu/en/mission/community-of-practice>

⁷⁸ <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>; standard Horizon Europe funding rules apply - only participants from some of these countries are automatically eligible for funding

	Programme of the European Atomic Energy Community (2021-2025). ⁷⁹ .
<i>Exceptional page limits to proposals/applications</i>	The page limit of the application is extended by two pages to 52 to properly address Societal Readiness-related issues.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Climate policies are made more inclusive and equitable, facilitating acceptance across political and societal stakeholders with various socio-economic and development status, both within the EU and globally, enabling high ambition climate action and helping to deliver on the European Green Deal’s commitment to “leave no one behind”;
- There is an improved consensus between the Global North and the Global South within the UNFCCC process, unlocking a greater momentum in the implementation of the Paris Agreement;
- The evidence base underpinning IPCC assessments is strengthened, diversified, and made more inclusive, facilitating consensus and government approval processes;
- Social science perspectives on justice and equity are better incorporated into policy narratives, scenarios, and models, improving their societal relevance and ensuring that climate action strategies are more reflective of the needs, values and concerns of diverse societal groups, building trust in results and outcomes, and increasing their uptake potential.

Scope: Climate change and the transition to low-carbon, climate-resilient future raises complex justice questions around equitable sharing of benefits and burdens of mitigation and adaptation efforts. These considerations not only animate global climate negotiations, but also increasingly emerge as a central issue for national politics, legal systems and for the society at large. Fairness thus becomes both a critical enabler and a potential barrier for shaping ambitious climate action, underscoring the need for prioritising research on advancing just climate transitions within the EU and globally.

For example, mitigation scenarios that have informed and influenced global climate policymaking and target-setting, and form a vital component of IPCC assessments, have been criticised for not considering fairness more explicitly and systematically, creating a barrier to their acceptance as a basis for global mitigation efforts. On the other hand, to avoid exacerbating existing vulnerabilities and locking into maladaptive pathways, it is also necessary to better account for the justice dimension in adaptation planning and implementation.

⁷⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Actions should advance more comprehensive and interdisciplinary understanding of climate justice in the context of the European and global mitigation and adaptation policies, promoting awareness, consistency and co-production approaches. They should take into consideration socio-economic, territorial and development disparities that exist between and within countries, regions and across various segments of the population. Actions should address multiple dimensions of justice, diverse spatial and temporal scales (e.g., intergenerational justice), and explore the role of a broad range of social, political, economic, and cultural contexts and factors. These include both collective (such as values, power structures, institutional and legal frameworks, political economy, development models, climate elites) and individual (such as age, gender, and intersectionality) features. Building on the resulting insights, actions are expected to develop recommendations on how to design, implement and evaluate just climate transitions, including definition of specific indicators, standards, and criteria to better operationalise the justice concept in adaptation and mitigation pathways. Among others, actions should address some of the following aspects ⁸⁰:

- Improve integrated assessment models to better represent justice and equity, differences in regional outcomes, and common but differentiated responsibilities and respective capabilities;
- Enhance clarity, comparability, and transparency across global mitigation scenarios with regard to different justice aspects. Evaluate the feasibility and consistency of regionally differentiated long-term mitigation goals in terms of, for example, investments and financial flows, governance and institutional needs;
- Analyse distributional aspects of climate policies, assess consequences for well-being and living standards of people from different socio-economic and development contexts. Advance research to assess the needs of and the effects on the most vulnerable and disadvantaged population segments (e.g., elderly, children, women, migrants, minorities, households at risk from energy and/or transport poverty) and sectors, and provide recommendations for corrective measures;
- Assess the trade-offs and co-benefits between climate action and inequality reduction. Explore the role of inequality and injustice as constraints to individual and collective climate action;
- Investigate innovative climate policy instruments, initiatives and approaches alternative to those prioritising economic efficiency and propose a broader spectrum of climate policies with more attention to equity. Assess their feasibility;
- Investigate justice in the context of sectorial transitions, with focus on under-researched (from justice perspective) sectors such as agriculture, forestry and land use;

⁸⁰ The evaluation will follow the standard Horizon Europe evaluation criteria, regardless of the number of the aspects covered.

- Advance research on how to better account for the needs and constraints of communities representing diversity of vulnerability profiles in disaster risk reduction and adaptation strategies.

Actions should address justice and equity of climate policies both within the EU and from a global perspective, but they may choose to prioritise one of these dimensions, using the other as framing information.

The research should be conducted through close collaboration between research teams from Europe and low or middle-income countries, hence international cooperation is required (see eligibility conditions). Moreover, involvement of key stakeholders and regional experts as part of an inclusive process is essential to guarantee that all relevant perspectives are adequately represented. The involvement of civil society is also highly recommended.

All projects funded under this topic are strongly encouraged to connect, coordinate, and participate in networking, intercomparison and joint activities, to exploit synergies and maximise complementarities. They should also envisage clustering activities with other relevant projects (in⁸¹ and outside of Horizon Europe) for cross-projects cooperation and exchange of results. Proposals should earmark the necessary resources for these purposes.

This topic is a Societal-Readiness pilot:

- Proposals should follow the instructions applying to the Societal readiness pilot, as described in the introduction of the Horizon Europe Main Work Programme 2025 for Climate, Energy and Mobility. They entail the use of an interdisciplinary approach to deepening consideration and responsiveness of research and innovation activities to societal needs and concerns.
- This topic requires effective contribution of the relevant SSH expertise, including the involvement of SSH experts in the consortium, to meaningfully support Societal Readiness. Specifically, SSH expertise is expected to enable the design of project objectives with Societal Readiness related activities. Consortia should mobilise a variety of SSH research backgrounds, in particular equity, poverty, and gender experts.

HORIZON-CL5-2025-06-D1-07: Implementing the climate action pillar of the EU-African Union Partnership on Climate Change and Sustainable Energy

Call: Cluster 5 Call 06-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and

⁸¹ For example, relevant projects funded under the calls of Horizon Europe Cluster 5 on Climate sciences and responses and Cluster 2 on Innovative research on social and economic transformations.

	selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If eligible for funding, legal entities established in the African Union member states⁸² may exceptionally participate in this Coordination and Support Action as beneficiary or affiliated entity.</p> <p>In addition, international organisations with headquarters in a European Union Member State, Horizon Europe Associated Country or an African Union Member State are also exceptionally eligible to participate (and eligible for funding).</p> <p>At least 40% of the beneficiaries must be legal entities established in the African Union Member States.</p>

Expected Outcome: The action is intended to set the foundation for future collaborative activities between the African Union (AU) and the European Union (EU) on climate change research in the context of the implementation of the Partnership on Climate Change and Sustainable Energy (CCSE)⁸³ under the AU-EU High Level Policy Dialogue (HLPD) on Science, Technology, and Innovation⁸⁴ and its Innovation Agenda⁸⁵.

Project results are expected to contribute to all of the following expected outcomes:

- Stakeholders, including funding entities, contribute more effectively to the implementation of the climate action pillar of the AU-EU CCSE Research and Innovation Partnership through an agreed strategy and reinforced R&I coordination;
- The R&I agendas and initiatives on climate issues relevant for Africa are better aligned and defragmented between the EU, national and multilateral levels. The impact of funding is enhanced;
- The climate-related data gap on Africa is reduced and AU countries are better able to access, utilise, and deploy state-of-art climate knowledge and services to inform decision-making and to accelerate a science-based implementation of the Paris Agreement and the Agenda 2030 on Sustainable Development;

⁸² "African Union member states" excludes countries whose membership has been temporarily suspended.

⁸³ https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/europe-world/international-cooperation/regional-dialogues-and-international-organisations/eu-africa-cooperation/partnership-climate-change-and-sustainable-energy-ccse_en

⁸⁴ https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/europe-world/international-cooperation/regional-dialogues-and-international-organisations/eu-africa-cooperation_en

⁸⁵ https://research-and-innovation.ec.europa.eu/system/files/2023-07/ec_rtd_au-eu-innovation-agenda-final-version.pdf

- Impacts and risks of climate change are more accurately assessed, adaptation strategies are developed, and early warning systems are deployed. This strengthens climate and disaster resilience in the AU member states, contributing to the international dimension of the EU Adaptation Strategy, the EU Disaster Resilience Goals, the Sendai Framework for Disaster Risk Reduction, the Nairobi Declaration and the Early Warnings for All initiative;
- The climate research community in the AU is strengthened, with researchers and scientific institutes enabled to engage more effectively in international fora and multilateral collaboration networks, with positive effects on diversity and quality of climate science and benefiting key international assessments and processes (e.g., IPCC, IPBES).

Scope: African societies and productive sectors are already experiencing widespread impacts from both natural hazards and human induced climate change. These include loss of lives and biodiversity, increased disease burden, water shortages, ocean acidification, reduced food production, and diminished labour efficiency and economic growth. The IPCC warns that with additional warming, the risks will further escalate, making a strong case for prioritising climate risk reduction and adaptation efforts while transitioning to low-carbon future. Socioeconomic, political, and other environmental factors - such as high demographic pressure, violent conflicts, biodiversity loss and pollution, unsustainable land and ocean use, strong reliance on agriculture and natural resources - interact with climate change to amplify the region's vulnerability. These compounded challenges undermine Africa's socio-economic advancements, hindering its efforts towards sustainable development. Yet, the continent is very poorly equipped to deal with these challenges: only 40% of its population has access to early warning systems⁸⁶ – the lowest rate of any region of the world, and many countries lack quality climate knowledge and data.

In addition, despite multiple efforts to promote climate research and capacity development, African scientists, scholars, and practitioners are still significantly underrepresented in international fora, such as the IPCC. Furthermore, the bulk of research concerning the region is performed by groups from developed and emerging countries, not sufficiently incorporating indigenous knowledge, local contexts and needs. It is now vital that the assessments of climate change, and its related impacts, risks and response strategies are increasingly delivered by the African community.

This action is intended as a preparatory step towards future joint collaborative activities between the EU and the AU, and their respective Member States to support the implementation of the “Climate Action for adaptation and mitigation” Pillar of the CCSE partnership. This pillar encompasses 1) climate-related data, 2) climate services, 3) and an integrated knowledge approach to support AU countries in their efforts to implement the Paris Agreement. These priorities should be used to frame the activities of the project. The action should establish a joint strategy for improving the availability and accelerating the uptake of advanced climate knowledge, data, and products across Africa. The aim is to enhance climate

⁸⁶ <https://www.undrr.org/news/early-warnings-all-africa>

literacy, to develop and increase uptake of climate services and early-warning systems, and to support capacity building while taking into consideration the continent's socio-economic circumstances and user needs. It is expected to address all of the following aspects:

- Develop a joint roadmap identifying priorities, flagship actions and feasible implementation architecture (including most appropriate financing instruments, not limited to EU level) to pave the way towards more targeted EU-AU cooperation on climate change research, with particular focus on climate risk reduction and resilience building (to be delivered within the first year of the project);
- Mobilise and secure commitments from European and African national funding entities and other actors (e.g., philanthropies, international cooperation entities and financial institutions) necessary to implement joint EU-AU collaborative activities, including a potential Horizon Europe co-fund action in 2026-2027 work programme (ideally within the first year of the project);
- Map the relevant EU funded projects (such as CONFER, FOCUS-Africa, DOWN2EARTH, ALBATROSS, SAFE4ALL, HABITABLE, TEMBO-Africa, SINCERE⁸⁷), match their outputs with the objectives of the CCSE Partnership, and cluster them to establish a vibrant community. Develop and implement a strategy to consolidate, curate, valorise and disseminate the projects' outputs towards African and European stakeholders to amplify their impact. This should include a user-friendly approach (ideally integrated into and complementing existing mechanisms/repositories) for sharing best practises and lessons learnt from past and ongoing EU-funded projects, and with links to internationally and nationally funded activities, to provide visibility and enable scaling and replication of successful initiatives. In addition, the action should also investigate how Europe could best learn from Africa and how to valorise, disseminate knowledge and implement solutions from the EU Mission on Adaptation to Climate Change, other relevant EU Missions and other initiatives (like the Partnership for Research and Innovation in the Mediterranean region, PRIMA) that are of relevance to the African context;
- Design and start implementing training and capacity building strategy that should enable: i) effective climate action planning and management, ii) enhanced representation and diversity of African science and scientists in international fora, iii) upscaled generation of policy relevant knowledge, data, products and services, on climate change, and iv) a greater participation of women, youth, indigenous and marginalised communities.

The action should bring together core European and African funding agencies (and define a credible pathway for mobilising additional funders), research organisations and other key African entities such as regional and national climate service centres. Strong representation of African partners in the consortium is a core requirement (see eligibility conditions). In addition, the action should strive at better connecting scientists, policy makers, practitioners,

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Please refer to <https://cordis.europa.eu/projects/en> for more information

and local communities for integrated solutions, at mobilising private sector engagement and at promoting the uptake of indigenous knowledge and Citizen Science. Efforts should be made to ensure that the data produced in the context of this topic is managed according to the FAIR principles⁸⁸.

The action should build on and aim at improving the coordination between existing and forthcoming multilateral and bilateral initiatives, such as the Climate Services for Risk Reduction in Africa (CS4RRA)⁸⁹, the ClimSA⁹⁰ programme, as well as projects funded by the EU (Horizon 2020 and Horizon Europe) and the JPI-Climate (ERA4CS). Synergies should also be sought, where possible, with relevant activities of the World Climate Research Programme, the World Adaptation Science Programme, the World Meteorological Organisation, the Group on Earth Observations, or the Copernicus programme. It is advisable that the action integrates the lessons learnt from the implementation of the energy pillar of the CCSE Partnership⁹¹.

⁸⁸ FAIR (Findable, Accessible, Interoperable, Reusable).

⁸⁹ <http://cs4rra.wascal.org/>

⁹⁰ <https://www.climsa.org/>

⁹¹ See <https://cordis.europa.eu/project/id/815264> and <https://cordis.europa.eu/project/id/963530>

Cross-sectoral solutions for the climate transition

This Destination contributes directly to the Strategic Plan's **Key Strategic Orientations** 'Green transition', 'Digital transition' and 'A more resilient, competitive, inclusive and democratic Europe'.

In line with the Strategic Plan, the overall **expected impact** of this Destination is to contribute to the "Facilitating a clean and sustainable transition of the energy and transport sectors towards climate neutrality through cross-cutting solutions".

This Destination covers thematic areas which are cross-cutting by nature and can provide key solutions for climate, energy and mobility applications. In line with the scope of cluster 5 such areas are batteries, hydrogen⁹², communities and cities⁹³ and others. Although these areas are very distinct in terms of challenges, stakeholder communities and expected impacts, they have their cross-cutting nature as a unifying feature and are therefore grouped, if not addressed in other places of this work programme, under this Destination.

The main impacts to be generated by topics under this Destination are:

Batteries

- Increased competitiveness and strategic autonomy of EU Battery sector while maximising sustainability.
- Enhanced local and circular supply chains by reducing dependency on critical raw materials and upscaling processing capacity, also for recycled materials.
- An integrated European battery sector for high performance batteries, from design to manufacturing and all the way to end of life, reducing environmental impact.
- Improved resilience of EU energy system and facilitated integration of renewable energy sources through application of energy storage.
- Affordable and reliable batteries to boost the market penetration of Electric Vehicles and storage systems.

Cities and Communities

This topic is for continuation of the **Driving Urban Transition (DUT) co-funded partnership** to assist cities in their sustainability and climate neutrality transitions. The main impacts expected are:

⁹² The bulk of activities are supported by the Institutional Partnership 'Clean Hydrogen'.

⁹³ Communities and cities are mainly supported under the Mission on Climate-Neutral and Smart Cities, and through the co-funded Partnership 'Driving Urban Transition', implemented in this work programme as a grant to identified beneficiary.

- Strengthen EU as a role model for R&I and cooperation with international cities to align strategies and support the role of DUT as co-lead of the Urban Transitions Mission (UTM) under Mission Innovation (MI);
- Innovative urban governance, policy, and decision-making engaging citizens in the city making process;
- Integration of mobility and transport services, and their alignment with citizens' needs;
- Climate-neutral, safe, inclusive and liveable neighbourhoods, towns, cities and urban services for the citizens' well-being;
- Empowerment of all actors such as local authorities, business, civil society, knowledge institutions and citizens, being engaged in climate-neutrality transitions;
- Evidence-based implementation of the European Green Deal, the Urban Agenda for the EU and other urban-relevant policies and strategies.

Batteries

Proposals are invited against the following topic(s):

HORIZON-CL5-2026-01-D2-01: Development of sustainable and design-to-cost batteries with (energy-)efficient manufacturing processes and based on advanced and safer materials (Batt4EU Partnership)

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 24.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL6 (for manganese-rich HLM) and TRL7 (for lithium manganese iron phosphate and sodium-ion) by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- Development of next generation low-cost batteries for improving the affordability of electric mobility, enhancing the competitiveness of the European battery value chain, while lowering the share of Critical Raw Materials (CRM)⁹⁴;
- Improved adaptation and flexibility of advanced and sustainable production processes in European battery manufacturing;
- Improved adaptation/flexibility of design-to-circularity strategies.

Scope: Proposals are expected to target technologies for design-to-cost batteries, with little reliance on CRMs, from one of the following two main technologies:

- Liquid electrolyte lithium-ion batteries with lithium manganese iron phosphate (LMFP) or manganese-rich HLM (high lithium, manganese) as cathode materials (design-to-cost lithium-ion batteries for mobility⁹⁵);
- Sodium-ion batteries for mobility applications.

The projects are expected to demonstrate, at the end of the project, the following:

For HLM and LMFP chemistries, at the cell level:

- Gravimetric energy density and volumetric energy density of at least 220 Wh/kg (for LMFP) and 250 Wh/kg (for HLM) and 550 Wh/L (for both) at operational temperature, respectively;
- Charging duration of 20 minutes (20-80% SoC);
- Cycle life of >4000 cycles for LMFP and >1500 cycles for HLM at 80% depth of discharge;
- Electric Vehicle (EV) grade cell format and capacity;
- A feasible pathway towards a competitive cost of 50-75€/kWh at pack level by 2030.

For sodium-ion batteries at cell level:

- Gravimetric energy density and volumetric energy density of 180-200 Wh/kg and 400+ Wh/L at operational temperature, respectively;
- Cycle life of 4000-6000 cycles at 80% depth of discharge;
- Charging duration of 20 minutes (20-80% SoC);
- EV grade cell format and capacity;

⁹⁴ [Regulation - EU - 2024/1252 - EN - EUR-Lex \(europa.eu\)](https://eur-lex.europa.eu/eli/reg/2024/1252/oj)

⁹⁵ <https://bepassociation.eu/our-work/sria/>

- A credible pathway towards a competitive cost level of 50-75€/kWh at pack level by 2030.

Projects are expected to demonstrate the production of cell prototypes at pilot level and feasibility of compatibility (or improvement) of the developed materials with regards to at least one of the following cell production processes:

- Dry or aqueous processing technologies;
- Advanced electrode drying processes;
- Improved cell formation processes and aging protocols;
- Improved energy efficiency of processes in dry rooms.

Proposals are expected to provide the corresponding state-of-the-art benchmark for the selected production process and compare the project's compatibility or improvement targets to said benchmark.

Furthermore, projects are expected to demonstrate the feasibility of compatibility (or improvement) of the developed materials with regards to at least one of the following:

- Design for sorting, dismantling, separation, cost-effective repairing/regeneration, and safe recycling (including direct recycling);
- Adapting Sensing solutions to improve lifetime and state of health detection;
- Quantification of degradation mechanisms at early stage to determine the best strategy for beyond the first life.

The Commission initiative for Safe and Sustainable by Design⁹⁶ (SSbD) sets a framework for assessing the safety and sustainability of chemicals and materials which should be considered as a reference for project proposals.

Whenever the expected exploitation of project results entails developing, creating, manufacturing and marketing a product or process, or in creating and providing a service, the plan for the exploitation and dissemination of results must include a strategy for such exploitation. The exploitation plans are expected to include preliminary plans for scalability, commercialisation, and deployment (feasibility study, business plan) indicating the possible funding sources to be potentially used (in particular the Innovation Fund).

Proposals could consider the involvement of the European Commission's Joint Research Centre (JRC)⁹⁷ whose contribution could consist in providing added value regarding integral evaluation of safety of materials. For further information on the JRC's possible contribution to the projects, please, search for additional publicly available information on the JRC's

⁹⁶ https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/key-enabling-technologies/chemicals-and-advanced-materials_en

⁹⁷ https://joint-research-centre.ec.europa.eu/laboratories-z/battery-energy-storage-testing_en

website (EU Science Hub) on the NCP portal, or request specific information from the JRC (JRC-NCP-Network@ec.europa.eu)

JRC shall assure that all the other applicants receive the same information on the JRC's possible contribution to the project (e.g., via the topic-specific FAQs under the Funding and Tenders Portal).

Projects are expected to collaborate and contribute to the activities of the Coordination and Support Action defined under the topic HORIZON-CL5-2025-D2-02-06.

To strengthen the European battery ecosystem, projects are expected to use materials, products and equipment produced in EU Member States and countries associated to Horizon Europe, unless it is demonstrated that no valid option exists. The procurement strategies should be described in the proposal, especially and to the furthest extent possible the place of production of the elements.

This topic implements the co-programmed European Partnership on Batteries (Batt4EU). As such, projects resulting from this topic will be expected to report on the results to the European Partnership on Batteries (Batt4EU) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-01-Two-Stage-D2-02: Cost-effective next-generation batteries for long-duration stationary storage (Batt4EU Partnership)

Call: Cluster 5 Call 01-2025 (2-stage) (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>

<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁹⁸.</p>

Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- Advanced battery materials aiming at storage duration from 10 hours to seasonal storage are developed, thus contributing to the Renewable Energy targets set by RePowerEU;
- Minimised use of Critical Raw Materials (CRM) in line with the EU's Critical Raw Materials Act ⁹⁹ to enhance economic base, reduce dependencies and ensure competitiveness in green and digital transitions;
- Development of viable alternatives to the current state of the art for battery technologies and to other seasonal storage devices in terms of cost, efficiency, safety, lifetime and (environmental) sustainability;
- Improved longevity of energy storage systems;
- Battery technologies with minimal required auxiliary services, storage in a wide range of State-of-Charges (SOCs), and minimal voltage slippage.

Scope: This topic aims to promote the development of materials that are recyclable, with low environmental impact, safe and with a potential for large-scale manufacturing. To the extent possible, the safety and sustainability of developed materials are expected to be assessed in alignment with the Commission Recommendation on safe and sustainable by design chemicals and materials¹⁰⁰.

Projects are expected to demonstrate credible commercial and technical paths that are able to satisfy all the following points:

- Energy storage system cost (CAPEX) lower than 50 €/kWh;

⁹⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁹⁹ [Regulation - EU - 2024/1252 - EN - EUR-Lex \(europa.eu\)](https://eur-lex.europa.eu/eli/reg/2024/1252/oj)

¹⁰⁰ https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/recommendation-safe-and-sustainable-chemicals-published-2022-12-08_en

- Projected lifetime of 20 years with minimised self-discharge in operating and ambient conditions typical of the selected application;
- Minimum round-trip efficiency of 50% at energy storage system (AC) level and 75% at cell level;
- Large-scale deployment in the long term of reliable materials supply and manufacturing of cell or reaction stack.

Projects are expected to focus on technologies that are presently at a low Technology Readiness Level. Lithium-ion, vanadium-based redox flow, sodium-ion using liquid electrolyte, molten sodium-sulphur and other commercialised technologies are out of scope of this topic.

Taking the above into account, the scope of the topic is technology neutral. In case the following battery chemistries or configurations are chosen, the following points must be addressed:

- For metal-air chemistries: reduce sensitivity to impurities of gases;
- For multivalent chemistries: develop electrolytes with reduced corrosivity and improved compatibility with other cell components and housing;
- For materials for redox flow chemistries: develop redox couples with minimised share of Critical Raw Materials (CRM)¹⁰¹;
- For Potassium batteries: address rate performance limitations due to potassium ion diffusivity and electrolyte decomposition due to high K⁺/K redox.

Projects are encouraged to implement calibrated and validated computational models and/or (generative) artificial intelligence methods for materials discovery and cell design.

Whenever the expected exploitation of project results entails developing, creating, manufacturing and marketing a product or process, or in creating and providing a service, the plan for the exploitation and dissemination of results must include a strategy for such exploitation. The exploitation plans should include preliminary plans for scalability, commercialisation, and deployment (feasibility study, business plan).

Proposals could consider the involvement of the European Commission's Joint Research Centre (JRC)¹⁰² whose contribution could consist of performing experimental research on battery performance and/or safety. For further information on the JRC's possible contribution to the projects, please, search for additional publicly available information on the JRC's website (EU Science Hub) on the NCP portal, or request specific information from the JRC (JRC-NCP-Network@ec.europa.eu)

¹⁰¹ [Regulation - EU - 2024/1252 - EN - EUR-Lex \(europa.eu\)](#)

¹⁰² https://joint-research-centre.ec.europa.eu/laboratories-z/battery-energy-storage-testing_en

JRC shall assure that all the other applicants receive the same information on the JRC's possible contribution to the project (e.g., via the topic-specific FAQs under the Funding and Tenders Portal).

Projects are expected to collaborate and contribute to the activities of the Coordination and Support Action defined under the topic HORIZON-CL5-2025-D2-02-06.

To strengthen the European battery ecosystem, projects are expected to use materials, products and equipment produced in EU Member States and countries associated to Horizon Europe, unless it is demonstrated that no valid option exists. The procurement strategies should be described in the proposal, especially and to the furthest extent possible the place of production of the elements.

This topic implements the co-programmed European Partnership on Batteries (Batt4EU). As such, projects resulting from this topic will be expected to report on the results to the European Partnership on Batteries (Batt4EU) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-02-D2-03: Sustainable processing and refining of raw materials to produce battery grade Li-ion battery materials (Batt4EU Partnership)

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>To increase EU resilience in raw materials supply chains and thus reduce the serious risk to the Union's strategic assets, economic and societal interests, autonomy and security associated with the current EU reliance on a few third countries for critical raw materials, by increasing sustainable and responsible sourcing of primary and secondary raw materials necessary to enable the green and digital transition and in alignment with the Communication (2020) 474 on Critical Raw</p>

	Materials Resilience and the Critical Raw Materials Act ¹⁰³ , participation in this topic is limited to legal entities established in Member States, associated countries, OECD countries, African Union Member States, MERCOSUR, CARIFORUM, Andean Community and countries with which the EU has concluded strategic partnerships on raw materials ¹⁰⁴ as well as trade (or association/economic partnership or equivalent, including the new Clean Trade and Investment Partnerships) agreements containing raw materials cooperation provisions (i.e. Energy and Raw materials chapters) ¹⁰⁵ . The choice of these countries was made taking into consideration the development of strategic international partnerships on raw materials and avoidance of reinforcing existing over-dependencies, as well as the importance of involving partners committed to pursuing open trade in such materials. Proposals including legal entities which are not established in the countries that fall under the criteria above will be ineligible.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁰⁶

Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- Increased autonomy for the EU in the battery raw materials sector, with a focus on creating new business models and opportunities within a strengthened battery value chain;

¹⁰³ Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 ([OJ L, 2024/1252, 3.5.2024, ELI: http://data.europa.eu/eli/reg/2024/1252/oj](#)).

¹⁰⁴ [Raw materials diplomacy - European Commission \(europa.eu\)](#)

¹⁰⁵ https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/negotiations-and-agreements_en

¹⁰⁶ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Increased processing and refining capacities of battery raw materials, contributing to the target of 40% of domestic processing capacity in the EU for Strategic Raw Materials¹⁰⁷;
- Advanced technologies for the processing of primary and secondary raw materials into high-quality battery metals or active materials are demonstrated, emphasising operational feasibility;
- Sustainability, efficiency, and resilience of the European Li-ion battery sector is significantly increased by adopting innovative refining and processing solutions;
- Circular battery value chains within EU are promoted by expanding the European refining capacity for secondary streams and implementing the objectives of the Batteries Regulation¹⁰⁸;
- Improved societal acceptance and benefits of processing plants.

Scope: Projects are expected to demonstrate the cost-efficient, safe and sustainable production of at least one of the following final products:

- Battery-grade metals and precursors;
- Electrode active materials.

Raw materials in the scope are limited to lithium, cobalt, graphite, nickel, manganese and phosphorus.

The proposed processes need to be ready for large-scale adoption, using at least one of the following source materials:

- Primary: Refining of raw materials sourced from ores, brine, or other mineral-bearing resources, using processes tailored to raw materials originating from the EU (or countries associated to Horizon Europe);
- Secondary, such as mining waste, tailings, sludges and slags (for Ni, Co), intermediate products of end-of-life processes (e.g., black mass), manufacturing scraps, and wastewater from processing.

Mining and mechanical recycling processes of battery cells, modules and packs are out of scope for this topic. The use of waste batteries and battery manufacturing waste which require mechanical (pre-)treatment is also out of scope.

Integration of produced electrode materials into cell production is out of scope, but validation of functionality and quality of the processed materials is within the scope.

¹⁰⁷ Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 (OJ L, 2024/1252, 3.5.2024, ELI: <http://data.europa.eu/eli/reg/2024/1252/oj>).

¹⁰⁸ https://environment.ec.europa.eu/topics/waste-and-recycling/batteries_en

Whenever the expected exploitation of project results entails developing, creating, manufacturing and marketing a product or process, or in creating and providing a service, the plan for the exploitation and dissemination of results must include a strategy for such exploitation. The exploitation plans are expected to include preliminary plans for scalability, commercialisation, and deployment (feasibility study, business plan) indicating the possible funding sources to be potentially used (in particular the Innovation Fund).

Proposals are expected to evaluate the social acceptance of the proposed sustainable business models, by consulting and involving actors directly affected by the planned processing activities. Proposals should demonstrate the potential of the proposed solutions to reduce environmental and social barriers to the deployment of new production facilities.

The Commission initiative for Safe and Sustainable by Design¹⁰⁹ (SSbD) sets a framework for assessing the safety and sustainability of chemicals and materials which should be considered as a reference for project proposals.

Proposals could consider the involvement of the European Commission's Joint Research Centre (JRC) whose contribution could consist of providing added value regarding various aspects of battery sustainability, considering in particular provisions of the 2023/1542 battery regulation. For further information on the JRC's possible contribution to the projects, please, search for additional publicly available information on the JRC's website (EU Science Hub) on the NCP portal, or request specific information from the JRC (JRC-NCP-Network@ec.europa.eu)

JRC shall assure that all the other applicants receive the same information on the JRC's possible contribution to the project (e.g., via the topic-specific FAQs under the Funding and Tenders Portal).

Projects are expected to collaborate and contribute to the activities of the Coordination and Support Action defined under the topic HORIZON-CL5-2025-D2-02-06.

This topic implements the co-programmed European Partnership on Batteries (Batt4EU). As such, projects resulting from this topic will be expected to report on the results to the European Partnership on Batteries (Batt4EU) in support of the monitoring of its KPIs.

HORIZON-CL5-2026-01-D2-04: Integrating advanced materials, cell design and manufacturing development for high-performance batteries aimed at mobility (Batt4EU Partnership)

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU</i>	The Commission estimates that an EU contribution of around EUR

¹⁰⁹ https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/key-enabling-technologies/chemicals-and-advanced-materials_en

<i>contribution per project</i>	10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Project results under this topic are expected to contribute to all of the following outcomes:

- European battery cell manufacturers are supported in their transition from incumbent (Gen.3) liquid electrolyte lithium-ion battery to high performance (solid-state) lithium-ion batteries;
- Increased diversity of chemistries, cell design (application-oriented) of the existing production lines and enabling European Original Equipment Manufacturers (OEMs) to stay competitive;
- Scaled production for premium products is targeted in the medium-term (for specific applications such as aviation), and large-scale production is targeted in the longer term.

Scope: The scope covers quasi-solid and all-solid-state lithium-ion battery technologies (up to 5% liquid electrolyte weight percentage) which encompasses Si-C composite anodes **or** lithium metal anodes.

Process-Specific Machinery and Technological Upgrades

Projects are expected to identify and target at least one key manufacturing process for enhancement, and to focus on optimising and testing the specific critical process(es) within existing production lines rather than overhauling the entire production system. These processes must be critical to the transition from liquid electrolyte to solid-state batteries and have the potential for high-impact improvements in terms of production yield, quality, cost, and sustainability including energy consumption.

Projects are expected to cover all of the following tasks:

- Provide detailed plans on how existing machinery and systems can be adapted to optimise the chosen process, ensuring that these enhancements are both impactful and economically viable;
- Modify existing machinery to better support the specialised requirements of the targeted process. This includes enhancing capabilities to handle new materials and designs efficiently;
- Develop and implement technological innovations that specifically enhance the chosen process, such as precision manufacturing tools and additive manufacturing.

Feasibility and Impact Validation

Projects are expected to conduct pilot testing to validate the feasibility and benefits of the enhancements on the chosen process. Proposals are expected to include clear metrics for evaluating improvements, such as reductions in energy consumption, increases in production yield, and enhancements in product consistency.

Projects are encouraged to evaluate the impact of the new or improved process on other steps in the manufacturing line, including any necessary modifications to adjacent processes, or across other parts of the production line and in different manufacturing environments.

Advanced Materials and Cell Design Integration

Projects are expected to tailor the design of the produced cell to maximise the benefits of the improved process. This can be done through the development of new advanced materials or through the integration of existing materials to improve the targeted manufacturing process.

Digitalisation, Data Integration and Analytics and Process Control

Projects are expected to cover at least one of the following tasks:

- Implement advanced control systems and digital technologies that are specifically designed to optimise the chosen process, improving efficiency, and reducing waste;
- Develop new process simulation methods, process models and materials chemistry models allowing to virtually assess novel cell designs' flexible manufacturability at scale for adapted existing plants.

In addition, projects are encouraged to leverage data analytics and data-driven approaches (artificial intelligence) to enhance decision-making and process optimisation, focusing on the specific needs and challenges of the targeted process.

Whenever the expected exploitation of project results entails developing, creating, manufacturing and marketing a product or process, or in creating and providing a service, the plan for the exploitation and dissemination of results must include a strategy for such exploitation. The exploitation plans are expected to include preliminary plans for scalability, commercialisation, and deployment (feasibility study, business plan).

Proposals could consider the involvement of the European Commission's Joint Research Centre (JRC)¹¹⁰ whose contribution could consist of performing experimental research on battery performance and/or safety. For further information on the JRC's possible contribution to the projects, please, search for additional publicly available information on the JRC's website (EU Science Hub) on the NCP portal or request specific information from the JRC (JRC-NCP-Network@ec.europa.eu).

JRC shall assure that all the other applicants receive the same information on the JRC's possible contribution to the project (e.g., via the topic-specific FAQs under the Funding and Tenders Portal).

Projects are expected to collaborate and contribute to the activities of the Coordination and Support Action defined under the topic HORIZON-CL5-2025-D2-02-06.

To strengthen the European battery ecosystem, projects are expected to use materials, products and equipment produced in EU Member States and countries associated to Horizon Europe, unless it is demonstrated that no valid option exists. The procurement strategies should be described in the proposal, especially and to the furthest extent possible the place of production of the elements.

This topic implements the co-programmed European Partnership on Batteries (Batt4EU). As such, projects resulting from this topic will be expected to report on the results to the European Partnership on Batteries (Batt4EU) in support of the monitoring of its KPIs.

HORIZON-CL5-2026-01-D2-05: Accelerated multi-physical and virtual testing for battery aging, reliability, and safety evaluation (Batt4EU Partnership)

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>The Joint Research Centre (JRC) may participate as member of the</p>

¹¹⁰ https://joint-research-centre.ec.europa.eu/laboratories-z/battery-energy-storage-testing_en

	consortium selected for funding.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹¹¹.</p>

Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- Shortened development time of battery cells and battery systems by minimising the experimental testing effort, thus reducing the overall costs and the time to market;
- Increased battery reliability and safety through better understanding of ageing, and safety-relevant (deactivation, degradation, failure) mechanisms;
- Acceleration of a more reliable verification and validation of new solutions contributing to increased user acceptability (safety, performance & costs) and competitiveness of the European battery value chain;
- Standardised battery system testing & validation approaches focussing on the combination of physical and virtual test methodologies.

Scope: This topic aims to reduce development costs and time to market of new battery systems by accelerated multi-physical and virtual testing. Current test strategies are still very time consuming and costly due to the need to understand the impact of multi-physical operational loads (electric, thermal, mechanical, etc.), potential failure modes, ageing and misuse on the safety and reliability of battery cells and modules.

To overcome these barriers, new multi-physical test strategies supplemented by virtual testing are required taking into account the most impactful parameters on ageing, reliability and safety and their dependencies.

Proposals are expected to address Electric Vehicle (EV) batteries and are encouraged to develop techniques and methodologies which are applicable to other forms of electro-mobility as well as stationary applications (including second life).

¹¹¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Proposals are expected to address and demonstrate all the following activities:

- Understand and describe the impact of multi-physical operational loads, failure modes, ageing and misuse on battery reliability and safety highlighting the dependencies between them in order to design the most adequate testing methods and parameters;
- Derive advanced operating profiles for testing and development of novel X-in-the-Loop (XiL) test environments for multi-physical and accelerated testing addressing electrical, thermal and mechanical loads at the same time;
- Combine physics-based with data-driven test strategies enabling reliable virtual and physical battery testing considering specific applications;
- Develop simplified test strategies reducing the number of tests and their complexity while improving battery safety and reliability. Synergies between different battery chemistries, including next generation battery designs and sizes must be exploited where possible, allowing to re-use or scale test results from cell to system level;
- Research activities are also expected to lead to advanced response strategies for damaged and aged batteries. Furthermore, a contribution to the European safety classification system is expected by developing standards for this safety classification. To this end, proposals are expected to establish contact and exploit complementarities with selected proposals under topic HORIZON-CL5-2025-04-D5-03 “Safe post-crash management of road Light Duty Battery Electric Vehicles (BEVs) (2ZERO Partnership)” with regards to monitoring techniques for safety risks, algorithms for defining state of health and remaining useful life.

Activities covering the following aspects are encouraged:

- Development of virtual methods for full system validation using physical sub-system results;
- Development, exploitation, and harmonisation of advanced battery cell or pack measurement and diagnostic methods for enhancing the data depth and breadth over what is currently available. Definition of performance indicators relating to battery degradation and safety, and development of methods for the validation of digital models.
- Application of AI and generative AI for the definition of the design of experimental and testing strategies to increase the outcome of experimental testing campaigns, in order to accelerate achievement of significant conclusions, and to thus reduce testing time and effort.

Whenever the expected exploitation of project results entails developing, creating, manufacturing and marketing a product or process, or in creating and providing a service, the plan for the exploitation and dissemination of results must include a strategy for such exploitation. The exploitation plans are expected to include preliminary plans for scalability,

commercialisation, and deployment (feasibility study, business plan) indicating the possible funding sources to be potentially used (in particular the Innovation Fund).

Proposals are expected to also establish cooperation and complementarity with the selected proposal under the topic HORIZON-CL5-2023-D2-02-03: “Creating a digital passport to track battery materials, optimise battery performance and life, validate recycling, and promote a new business model based on data sharing (Batt4EU Partnership)” with regards to safety and ageing information as part of the battery passport.

Proposals could consider the involvement of the European Commission's Joint Research Centre (JRC)¹¹² whose contribution could consist of performing experimental or desk-top research on battery performance and/or safety. For further information on the JRC's possible contribution to the projects, please, search for additional publicly available information on the JRC's website (EU Science Hub) on the NCP portal, or request specific information from the JRC (JRC-NCP-Network@ec.europa.eu)

JRC shall assure that all the other applicants receive the same information on the JRC's possible contribution to the project (e.g., via the topic-specific FAQs under the Funding and Tenders Portal).

Projects are expected to collaborate and contribute to the activities of the Coordination and Support Action defined under the topic HORIZON-CL5-2025-D2-02-06.

To strengthen the European battery ecosystem, projects are expected to use materials, products and equipment produced in EU Member States and countries associated to Horizon Europe, unless it is demonstrated that no valid option exists. The procurement strategies should be described in the proposal, especially and to the furthest extent possible the place of production of the elements.

This topic implements the co-programmed European Partnership on Batteries (Batt4EU). As such, projects resulting from this topic will be expected to report on the results to the European Partnership on Batteries (Batt4EU) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-02-D2-06: Fostering the European battery ecosystem by providing accurate and up-to-date information and stimulating excellence in the European battery R&I community (Batt4EU Partnership)

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

¹¹² https://joint-research-centre.ec.europa.eu/laboratories-z/battery-energy-storage-testing_en

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹¹³.</p>

Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- A solid basis of information is established addressing R&I stakeholders and supporting decision making within the European battery value chain, at European, national, and regional levels, and for public and private actors alike;
- An agile European battery value chain is set up that can update its priorities based on global trends;
- Maximisation of the scientific, technological, economic, and societal impact of the BATT4EU Partnership and its projects and paving the way to industrial exploitation of their research results in key energy and transport application domains;
- A well-coordinated, best-in-the-world, battery research community is fostered in Europe, gathering excellent scientists and innovators as well as involving other relevant stakeholders;
- Excellence in battery research is spread across Europe, enhancing the wide adoption of best practices.

Scope: The project proposal should cover all of the following tasks:

¹¹³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Animate and organise the National and Regional Coordination Group (NRCG) in coordination with the Batteries European Partnership Association (BEPA)¹¹⁴;
- Cooperate with the European Technology and Innovation Platforms (ETIPs), Important Projects of Common European Interest (IPCEIs)¹¹⁵ and similar stakeholder fora.
- Provide support to existing SET Plan Implementation Plans and advancement towards more interconnected activities, both in terms of contents and implementation mechanisms;
- Create and maintain an online accessible platform which provides:
 - o A rolling assessment of the current state-of-the-art of the battery technology, both globally and in the EU and Associated Countries;
 - o An updated set of technical targets and intermediary KPIs to track the progress of the battery technology in the EU;
 - o A rolling overview of open and recently closed calls on batteries from research and innovation programmes on European, national, and regional level. This task should build upon the links with the NRCG, ETIPs, and any ongoing IPCEIs on batteries. Direct collaboration with national funding agencies is encouraged.

Proposals should include a credible strategy for how this platform could be continued beyond the time horizon of the project.

- Provide an analysis of battery roadmaps from other global regions and see how they compare to the state-of-art and targets set for the European battery technology development and propose updates to the European battery R&I strategy in a yearly report for short-, medium- and long-term research needs;
- Support monitoring efforts undertaken by the European Commission, the European Battery Alliance (EBA)¹¹⁶ regarding the above-mentioned indicators of technological progress in Europe;
- Provide scientific animation of the Battery R&I Community, that includes the organisation of (thematic) community events to improve the overall knowledge level of the sector; ensure that projects working on similar topics can learn from each other and that projects goals converge towards the objectives of the Partnership; inform on possible funding mechanisms (e.g., Innovation Fund and the EBA One-Stop-Shop) to take developed technologies to the next level;
- Share best practices with the community and push for adoption of common data standards and reporting methodologies;

¹¹⁴ [BATT4EU \(bepassociation.eu\)](https://batt4eu.eu)

¹¹⁵ [IPCEI Batteries \(ipcei-batteries.eu\)](https://ipcei-batteries.eu)

¹¹⁶ [Building a European battery industry - European Battery Alliance \(eba250.com\)](https://eba250.com)

- Co-organise together with BEPA and other interested stakeholders an annual conference where BATT4EU projects can share their results.

Proposals could consider the involvement of the European Commission's Joint Research Centre (JRC) whose contribution could consist of providing input to or discuss technical targets or KPIs and testing the capability of the observatory to provide meaningful data for EC / JRC work. For further information on the JRC's possible contribution to the projects, please, search for additional publicly available information on the JRC's website (EU Science Hub) on the NCP portal, or request specific information from the JRC (JRC-NCP-Network@ec.europa.eu)

JRC shall assure that all the other applicants receive the same information on the JRC's possible contribution to the project (e.g., via the topic-specific FAQs under the Funding and Tenders Portal).

This topic implements the co-programmed European Partnership on Batteries (Batt4EU). As such, projects resulting from this topic will be expected to report on the results to the European Partnership on Batteries (Batt4EU) in support of the monitoring of its KPIs.

Communities and cities

Proposals are invited against the following topic(s):

HORIZON-CL5-2025-06-D2-07: Driving Urban Transitions to a sustainable future (DUT) Co-Funded Partnership

Call: Cluster 5 Call 06-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 56.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 56.00 million.
<i>Type of Action</i>	Programme Co-fund Action
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The proposal must be submitted by the coordinator of the consortium funded under HORIZON-CL5-2021-D2-01-16: Co-Funded Partnership: Driving Urban Transitions to a sustainable future (DUT). This eligibility condition is without prejudice to the possibility to include additional partners.</p>

<p><i>Procedure</i></p>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The evaluation committee will be composed partially by representatives of EU institutions.</p> <p>If the outcome of amendment preparations is an award decision, the coordinator of the consortium funded under the grant agreement that was established in response to the call topic HORIZON-CL5-2021-D2-01-16 and HORIZON-CL5-2023-D2-01-08 will be invited to submit an amendment to the grant agreement, on behalf of the beneficiaries.</p>
<p><i>Legal and financial set-up of the Grant Agreements</i></p>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>This action is intended to be implemented in the form of an amendment of the grant agreement concluded pursuant to topics HORIZON-CL5-2021-D2-01-16 and HORIZON-CL5-2023-D2-01-08.</p> <p>For the additional activities covered by this action:</p> <ul style="list-style-type: none"> • The funding rate is up to 30 % of the eligible costs. • Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. • The maximum amount of FSTP to be granted to an individual third party is EUR 5.000.000. This amount is justified since provision of FSTP is the primary activity of this action and it is based on the extensive experience under predecessors of this partnership. <p>The starting date of the grant awarded under this topic may be as of the submission date of the application. Applicants must justify the need for a retroactive starting date in their application. Costs incurred from the starting date of the action may be considered eligible (and will be reflected in the entry into force date of the amendment to the grant agreement).</p>

Expected Outcome: This topic is a continuation of the Driving Urban Transitions to a sustainable future (DUT) Co-Funded Partnership to enable the roll-out of its full strategy and action plan and assist cities in their sustainability and climate neutrality transitions. Actions will contribute to the achievement of the European Green Deal targets, the UN 2030 Agenda for Sustainable Development commitments, the Urban Agenda for the EU, the New EU Urban Mobility Framework, the Habitat III New Urban Agenda and the Paris Agreement. European cities need to engage urgently in sustainability and climate-neutrality transitions.

The partnership is expected to contribute to all of the following expected outcomes:

- Enhanced multi-level cooperation and alignment on R&I on sustainable urban development across and within cities, regions, and countries, including international outreach and cooperation with other networks and initiatives;
- EU is strengthened as a role model for R&I on sustainable urban development; cooperate with international cities and research funding networks (e.g., Belmont Forum) to align strategies and R&I agendas and strengthen the role of DUT as co-lead of the Urban Transitions Mission (UTM) under Mission Innovation (MI). In this context, potential synergies could be also considered with ongoing EU funded work related to Africa, to enhance the implementation of DUT Strategic Research & Innovation Agenda (SRIA);
- Set up innovative, cross-sectoral, and inclusive urban governance, policy, and decision-making harnessing the full potential of social science and citizens' engagement in the city development process;
- Integrate emerging mobility and transport services, and align them with the citizens' needs and preferences;
- Foster sustainable, climate-neutral, safe, resilient, socially inclusive, liveable, and attractive neighbourhoods, towns, cities and urban services, with reduced environmental footprint (e.g., burdens from other pollutants, foster the reuse of materials in view of increased integration of circularity aspects) and net-zero greenhouse emissions, and enhance well-being and quality of life for citizens;
- Empower local authorities, municipalities, businesses, social partners, civil society, knowledge institutions and citizens with necessary capacity, knowledge and skills; deliver efficient urban tools, solutions methodologies and processes to actively engage in sustainability and climate-neutrality transitions;
- Increase science and evidence-based implementation of the European Green Deal, the Urban Agenda for the EU and other European, national, regional, and local urban-relevant policies and strategies (e.g., Circular Economy Action Plan).

Scope: The objective of this action is to continue to provide support to the European “Driving Urban Transitions to a sustainable future ” (DUT) Co-funded Partnership identified in the Horizon Europe Strategic Plan 2021-2024 – first implemented under the topic *HORIZON-CL5-2021-D2-01-16: Co-Funded Partnership: Driving Urban Transitions (DUT)* – and to fund additional activities (which may also be undertaken by additional partners) in line with its intended scope and duration, and in accordance with Article 24(2) of the Horizon Europe Regulation.

The proposal should capitalise upon new collaboration opportunities offered by the Association Agreements to Horizon Europe, the “EU Climate Neutral and Smart Cities” Mission and the Global Urban Transitions Mission (UTM) of Mission Innovation to enhance expertise, capacities, critical mass and broaden geographical coverage and outreach capacity.

With respect to international outreach, mutual benefits from collaboration and cooperation with global and international cities and research funding networks should be pursued to align strategies and research agendas and promote scientific evidence and good practice for urban policy at international level.

Taking into account that the present action is a continuation of topic HORIZON-CL5-2021-D2-01-16 and HORIZON-CL5-2023-D2-01-08, it foresees an amendment to an existing grant agreement, the proposal should describe plans, activities and initiatives that would enable the DUT to ensure, as appropriate, a seamless pursuance of its strategy, objectives and actions to fill important gaps in knowledge, evidence, innovation, technology, data, capacity and skills, integrated approaches, while fostering inclusive and participatory governance structures and assisting cities at European (and, as appropriate, global) level in designing and implementing the transition towards sustainability and climate neutrality.

The proposal should describe in detail additional activities (including additional partners) to be covered by the grant and justify their added value as compared to ongoing actions, whilst accounting for actual progresses in relevant EU and international policy frameworks and urban initiatives. The proposal is expected to cover DUT calls for proposals included in the work programme (2025-2027). from 2025 to 2027.

The proposal should elaborate on modalities to scale-up synergies with the works of the NetZeroCities Mission Platform, the CapaCITIES coordination and support action and, as appropriate, with other EU Missions and related platforms (e.g., MIP4Adapt). Those synergies will underpin the implementation of the “EU Climate Neutral and Smart Cities” Mission and ensure the coherence and complementarity of activities while leveraging knowledge and investment possibilities.

Furthermore, concrete actions should be envisaged to enhance collaboration and synergies with other European Partnerships such as Clean Energy Transitions (CET), Built environment and construction (Built4People), Rescuing biodiversity (Biodiversa+), Safe and Sustainable Food Systems, Towards Zero Emission Road Transport (2ZERO), Cooperative, Connected and Automated Mobility (CCAM), EIT Urban Mobility and Water4All.

Interfaces with public procurement and investment programmes and links with Urban Innovative Actions (UIA) under the Urban Agenda for the EU, the European Urban Initiative (EUI) under the Cohesion Policy Funds, private funds, etc. should be explored to support take-up and larger scale implementation of tested approaches and solutions.

The consortium that won the grant under topic HORIZON-CL5-2021-D2-01-16 is uniquely placed to submit a proposal to continue the envisioned partnership. It is noted that this consortium submitted the initial proposal leading to the identification of the partnership in the Horizon Europe strategic planning 2021-2024. Moreover, it has implemented the partnership through the co-funded calls in the years 2022 and 2023. In this context, the current consortium has specific expertise in relation to the objectives of the Partnership, the activities implemented in 2022 and 2023 co-funded calls, or other calls/scope of calls clearly required/envisaged pursuant to initial proposal/partnership, and other relevant aspects of the

action. In practice, no other consortium would be able to continue the activities of the Partnership underway without a significant disruption of the ongoing activities.

While the grant under this topic should be attributed to a proposal submitted by the coordinator of the consortium funded under topic HORIZON-CL5-2021-D2-01-16, the consortium applying to the present topic may include additional partners and new activities, to be funded by the grant subject to an evaluation, which will take into account the existing context and the scope of the initial evaluation (as relevant), and related obligations enshrined in the grant agreement.

Cross-cutting

Proposals are invited against the following topic(s):

HORIZON-CL5-2025-02-D2-08: Coordinated call with India on waste to renewable hydrogen

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The project must include at least one work package for coordinated activities with the linked project awarded by the Ministry of New and Renewable Energy of the Government of India (MNRE). In case of participation of legal entities established in India, which is a third country under Horizon Europe, these can only participate as associated partners.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Grants awarded under this topic will be linked to the coordinated project awarded by the Ministry of New and Renewable Energy of the Government of India (MNRE).</p>

Expected Outcome: In addition to renewable hydrogen produced by water electrolysis, there is a need to develop other technologies to cover the sustainable hydrogen demand of future society including industry, energy and transport. Agricultural, forest and industrial biogenic waste resources may offer significant potential for bio-based hydrogen production. R&I in this area has been identified as a priority by the EU-India Trade and Technology Council's Working Group on Green and Clean Energy Technology to reinforce bilateral cooperation.

Project results are expected to contribute to all of the following expected outcomes:

- Renewable hydrogen producers and consumers based in the EU and India benefit from improved sustainability, safety, and affordability of renewable hydrogen production technologies from biogenic wastes (compared to existing ones);
- Technology developers based in the EU and India benefit from the expanded portfolio of renewable hydrogen production concepts through biogenic wastes use;
- Stakeholders on renewable hydrogen production based in the EU and India benefit from each other's experience on renewable hydrogen from biogenic wastes;
- The cooperation between EU and India key researchers, institutions and industries which are active in biogenic waste to renewable hydrogen research is supported and strengthened.

Scope: The topic aims at developing innovative technologies to produce renewable hydrogen from biogenic wastes without recycling potential such as agricultural, forest and biogenic part of municipal wastes, sewage sludge and industrial waste waters, through biochemical and thermochemical Waste to renewable Hydrogen (W2rH) pathways. Focus will be on increasing the resource efficiency (carbon to hydrogen yield), reducing the GHG emissions or even generating a negative carbon footprint, decreasing environmental footprint for pollution and water consumption, and significantly reducing the production cost of hydrogen. Use of advanced catalysts to enhance primary conversion or upgrading of the intermediate from primary conversion or process intensification methods including advanced reactor technologies are in the scope. Utilisation of side streams such as aqueous and gaseous streams from primary conversion and/or their further conversion using biological, electrochemical, biochemical and/or catalytic technologies are in the scope as well. Development of feedstock pretreatment methods including sorting and post-treatment technologies required for hydrogen purification could be included in the projects.

An assessment of the feedstock cost supply at regional and local level suitable for the selected conversion technology and improvement of feedstock mobilisation patterns including via enabling technologies, such as digitalisation, should be performed. Preliminary economic feasibility as well as socioeconomic and environmental sustainability of the developed concept including assessing potential impacts on land use, water use, biodiversity, and greenhouse gas emissions, as well as social impacts, are expected to be assessed by the project on a life-cycle analysis basis. The production cost of the W2rH pathway should be compared to the state-of-the art production technologies of renewable hydrogen and with aim to be

reduced. Projects should develop an overall process concept using advanced modelling techniques including flowsheet modelling for mass and energy flows.

Safety aspects and ways to increase safety concerning the hydrogen and other gaseous and system component leakages are expected to be addressed in a ‘hydrogen safety planning and management’ plan at the project level. Project developers are encouraged to contact the European Hydrogen Safety Panel (EHSP)¹¹⁷ established under the Clean Hydrogen Partnership to benefit from the developed experience in safety issues for hydrogen systems. The projects should lead to commercially viable and economically interesting pathways when upscaled.

Organic waste being not biogenic is not in the scope of the call.

The exploitation of results, including IPR, should be appropriately addressed in the proposal.

Joint work should benefit from the Indian and European experience in W2rH. Linked EU and Indian projects should have the same start date, the same duration, and same targets. Proposals must show clearly how the coordination among them will bring added scientific value. To ensure a project implementation that reflects a genuine EU-Indian cooperation, linked projects should include properly coordinated research activities between EU and India in the Work Plan of the two coordinated projects.

Proposals will include detailed explanations about tasks and effort of the coordinated proposal as a whole and cross-references to the e proposal for the linked project.

This topic aims at exploiting synergies between India and Europe in terms of scientific expertise and resources in topics related to W2rH production by implementing coordinated projects. Potential areas for collaboration (i.e. the coordinated part of the call) could include (but are not limited to) optimising fermentation and thermochemical processes, developing new catalysts, and improving separation techniques, as well as assessment of sustainability, technoeconomic feasibility and safety aspects including by using advanced process modelling.

The topic falls within the scope of the EU-India Strategic Partnership and the EU-India Trade and Technology Council in relation to waste to renewable hydrogen. For the purposes of this topic, the Ministry of New and Renewable Energy of the Government of India (MNRE) has made the required funding available for the coordinated projects of the Indian side¹¹⁸. A balanced effort and matched budget between Europe and India regarding the two coordinated projects are expected.

In order to maximise synergies and increase the impact of the projects under this topic, proposals selected for funding under this topic will be required to participate in common networking and joint activities. Without the prerequisite to detail concrete joint activities, proposals should allocate a sufficient budget for the attendance of joint meetings periodically.

¹¹⁷ https://www.clean-hydrogen.europa.eu/get-involved/european-hydrogen-safety-panel-0_en

¹¹⁸ Ministry of New and Renewable Energy website: <https://www.mnre.gov.in>; MNRE R&D Portal: <https://research.mnre.gov.in>

HORIZON-CL5-2026-01-D2-09: Monitoring and Evaluation of the Societal Readiness Pilot

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: The evaluation committee will be composed partially by representatives of EU institutions.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹¹⁹ .

Expected Outcome: Societal Readiness (SR) is an indicator of R&I results, expressing they have accounted for different societal needs and concerns, thereby increasing their potential for societal uptake.

The project is expected to contribute to all of the following outcomes:

- The European Commission has a comprehensive overview on the way Societal Readiness is addressed and integrated in piloted projects, and main challenges and concerns are identified;
- A proven strategy to intensify collaboration between STEM¹²⁰ and SSH¹²¹ partners led to in-depth interdisciplinary work in R&I projects. All involved project constituencies and

¹¹⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹²⁰ Sciences, Technology, Engineering and Mathematics

relevant parts of society are accounted for in an integrated way to ensure broad and sustainable support for R&I solutions;

- The next generation of Societal Readiness projects benefits from current pilot projects' experiences, success stories and do's and don'ts thanks to a public web platform, acting as a one-stop-shop for Societal Readiness for future EU projects;
- The European Commission is equipped with a sound, clear, and replicable procedure – both at implementation and content level – presented as an improvement of the current approach, to address Societal Readiness effectively in future EU funded R&I projects.

Scope: The European Commission has a strong interest in learning from the implementation of Societal Readiness actions piloted in eight topics from the Cluster 5 work programme 2025¹²², and resulting in an estimate of eighteen projects to be implemented. Conclusions on the pilot's monitoring and evaluation will be the basis for the European Commission's decision to replicate further these actions, to improve its implementation and possibly widen its use to other fields of application.

The instructions and definitions applying to pilot topics are included in the introduction of the Horizon Europe Main Work Programme 2025 for Climate, Energy and Mobility.

The action is expected to analyse the way Societal Readiness is addressed and integrated in piloted projects and help in designing an efficient, clear, and impactful way of applying a Societal Readiness approach in future EU funded R&I projects with a true interdisciplinary collaboration.

The project selected should address all of the following actions:

- Make a consolidated analysis:
 - o on the way Societal Readiness is considered and integrated in the ***Descriptions of the Actions***¹²³ of selected pilot-projects in terms of content (e.g., the type of Responsible Research and Innovation (RRI) guiding questions chosen and related methodology), implementation (e.g., SR related work distribution and partners) and methodology. Assess the level, timing, and quality of interactions between SSH and STEM partners during the proposal preparation.
 - o of all ***First reports on Societal Readiness*** to be delivered by the selected pilot-projects. Assess the way SR consideration unfolds from the *Description of the Actions'* methodology, observe how guiding questions are addressed and plan to respond to the concerns identified. Compare the various 'SR visions' put forward by each consortium.

¹²¹ Social Sciences and Humanities

¹²² HORIZON-CL5-2025-03-D1-06; HORIZON-CL5-2025-02-D3-04; HORIZON-CL5-2026-02-D4-02; HORIZON-CL5-2025-04-D5-01; HORIZON-CL5-2025-04-D6-01; HORIZON-CL5-2025-04-D6-02; HORIZON-CL5-2025-04-D6-11; HORIZON-CL5-2025-04-D6-12

¹²³ A declaration of confidentiality will be signed by the CSA

- o of all ***Final reports on Societal Readiness*** to be delivered by the selected pilot-projects. Assess the various projects' experiences, challenges and lessons learned during the actual implementation of the Societal Readiness activities, looking at the participation and type of external actors in co-design methods, responses to SR guiding questions, possible adjustment of R&I activities.

Mid-project recommendations based on the two first points are expected in order to give a preliminary sense of directionality for future Societal Readiness projects.

- Analyse the various **interdisciplinarity** mechanisms (SSH vs. STEM, collaboration with societal stakeholders) across pilot-projects as well as their effectiveness in practice. Identify successful interdisciplinary approaches and less successful ones. Possible evolutions in partners behaviours, or changes in interdisciplinary strategies should be identified. The degree of involvement from partners in SR activities, as well as the way they perceive them (in a positive or negative way) should also be scrutinised. This analysis should result in a publication with concrete tips helping future project partners integrating implementable, efficient, and well-accepted interdisciplinary practices both within consortia and towards external actors.
- Organise **annual workshops** in physical format to allow all pilot project representatives to meet, interact and exchange experiences periodically. Travel costs for all participants are to be covered by this action.
- Set up a **public web platform** during the action duration, to provide a direct source of support to future SR users, including examples of SR pathways, do's and don'ts, tips and tricks specifically tailored to facilitate the use and understanding of the European Commission's approach on Societal Readiness. A survey submitted beforehand to pilot-projects partners could be envisaged to help in defining those needs. The platform should be updated and completed on a regular basis.
- Eventually provide a set of **recommendations to the European Commission** taking stock of the work achieved as well as of the recommendations elaborated by pilot-projects in their *Final reports on Societal Readiness*. Practical improvements of the current Societal Readiness approach should be proposed to overcome identified shortcomings, while at the same time, acknowledging the successful aspects of the current approach. The overall Societal Readiness vision¹²⁴ should be kept in mind when providing those recommendations, while aiming at keeping a lowest level of implementation complexity, a highest degree of understandability (including for non-SSH experts) and replicability to various technology maturities and fields of applications, as well as a strong interdisciplinary component.

¹²⁴ Societal Readiness is an indication of R&I results, expressing they have accounted for different societal needs and concerns, thereby increasing its potential for societal uptake and transition towards societal adaptation. Working towards Societal Readiness means to better understand that R&I should be driven by the needs, values, and expectations of diverse social groups, inclusive and transparent in processes and outcomes, active in identifying, mitigating, and avoiding negative social, environmental, and economic externalities.

An analysis of the added value of SR pilot topics compared to SSH-flagged-only-topics within Cluster 5 as well as of other relevant Societal Readiness routes (e.g. at national level) applied to R&I projects in the area of Climate, Energy and/or Mobility should be performed. Successful practices identified may complement recommendations to be provided to the Commission.

Information on e.g. on perceptions, feelings, concerns, past experiences on ways of working that is not translated into projects' documents should be collected via direct interactions (bilateral discussions with respective project partners).

The action should also initiate similar monitoring activities on Societal Readiness pilot projects funded under future Horizon Europe work programmes, whenever operational phases of this action and new pilot projects overlap.

A duration of 42 months is recommended for this action.

The proposed action requires the effective contribution of relevant SSH disciplines including the involvement of SSH experts to proficiently support the monitoring and evaluation of Societal Readiness pilot-projects in Cluster 5 work programme 2025.

HORIZON-CL5-2025-02-D2-10: Clean Energy Transition Co-Funded Partnership

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 69.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 69.00 million.
<i>Type of Action</i>	Programme Co-fund Action
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The proposal must be submitted by the coordinator of the consortium funded under HORIZON-CL5-2021-D3-01-04 Clean Energy Transition. This eligibility condition is without prejudice to the possibility to include additional partners.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The evaluation committee can be composed partially by representatives of EU institutions.</p> <p>If the outcome of amendment preparations is an award decision, the</p>

	<p>coordinator of the consortium funded under the topic HORIZON-CL5-2021-D3-01-04 will be invited to submit an amendment to the grant agreement, on behalf of the beneficiaries.</p>
<p><i>Legal and financial set-up of the Grant Agreements</i></p>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>This action is intended to be implemented in the form of an amendment to the grant agreement concluded pursuant to topics HORIZON-CL5-2021-D3-01-04 and HORIZON-CL5-2023-D3-01-18.</p> <p>For the additional activities covered by this action:</p> <ul style="list-style-type: none"> • The funding rate is up to 30 % of the eligible costs. • Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. • The maximum amount of FSTP to be granted to an individual third party is EUR 5.000.000. This amount is justified since provision of FSTP is the primary activity of this action and it is based on the extensive experience under predecessors of this partnership. <p>The starting date of the grant awarded under this topic may be as of the submission date of the application. Applicants must justify the need for a retroactive starting date in their application. Costs incurred from the starting date of the action may be considered eligible and will be reflected in the entry into force date of the amendment to the grant agreement.</p>

Expected Outcome: This topic is a continuation of the Clean Energy Transition Co-fund partnership (CET Partnership) and constitutes the EU contribution for the period 2025-2027.

The third instalment of the partnership will contribute to the expected outcomes specified in topic *HORIZON-CL5-2021-D3-01-04: Clean Energy Transition, for continuation and development of new activities.*

The partnership is expected to contribute to all of the following expected outcomes:

- Increased directionality of clean energy transition research and innovation in EU and Associated Countries in line with the SET Plan thanks to a shared pan-European vision on the goal and direction of required system transformation processes, adapted to regional needs and availability of renewable energy resources;
- Evidence based energy and climate policy formulation;

- A wider systemic transition and energy supply required for a climate neutral economy in all sectors of society; enabling the transition of the built environment, transport, industry and other sectors to clean, low carbon energy;
- An innovation ecosystem for Europe's transition to clean energy and contribution to a resource and energy efficient system, both from an ecological and economic standpoint;
- A building block to a zero-emission energy system for the decarbonisation of transport, buildings, industry, agriculture in the specific European environment;
- Increased engagement of consumers and prosumers as well as fair and appropriate demand-response mechanisms integrated in the energy system;
- An energy system that meets the needs of different parts of society, in different geographical locations (urban and rural) and different groups.

Scope: The Clean Energy Transition co-funded Partnership (CET Partnership) is a transnational initiative on joint R&I programming to boost and accelerate the energy transition, building upon regional and national R&I funding programmes.

It aims at empowering the energy transition and contributing to the EU goal of becoming the first climate-neutral continent by 2050, by pooling national and regional R&I funding for a broad variety of technologies and system solutions required to achieve the transition. It will foster innovation ecosystems from the very local and regional level, up to the transnational European level, thus overcoming a fragmented European landscape. The CET Partnership enables national and regional R&I programme owners and managers from Member States and Associated Countries to align their priorities and implement annual joint calls from 2022 to 2027. The Partnership also organises joint accompanying activities to enable a dynamic learning process, extracts strategic knowledge and accelerates the upscaling, replication, and market diffusion of innovative solutions to maximise impact and foster the uptake of cost-effective clean energy technologies.

The common vision of the CET Partnership is already expressed in its Strategic Research and Innovation Agenda (SRIA) that has been co-created with the involved countries, the EU SET Plan Implementation Working Groups and ETIPs, all energy relevant ERA-Nets as well as the EERA joint programmes (over 500 editors, co-authors, commenters, and discussants). The SRIA articulates the common goal of (1) building a transnational transformative Joint Programming Platform, (2) developing and demonstrating technology and solutions for the transition of energy systems, and finally (3) building innovation ecosystems that support capacity building at all levels.

The objective of this action is to continue to provide support to the European Clean Energy Transition Co-fund Partnership identified in the Horizon Europe Strategic Plan 2021-2024 and first implemented under topic HORIZON-CL5-2021-D3-01-04, and in particular to fund additional activities (which may also be undertaken by additional partners) in view of its

intended scope and duration, and in accordance with Article 24(2) of the Horizon Europe Regulation.

The new geopolitical and energy market realities require to drastically accelerate the clean energy transition and increase energy independence from unreliable suppliers and volatile fossil fuels. In support to the objectives of REPowerEU¹²⁵ it is expected that the partnership explores pathways and develops new actions to reinforce R&I investments (and utilisation of R&I results) accelerating the clean energy transition.

It is expected that the European Clean Energy Transition Co-Fund Partnership reinforces its ambition considering the revised SET Plan and continues the implementation of its SRIA by setting up joint calls in 2025, 2026 and 2027. In addition, the partnership is invited to setup joint calls without co-funding from the European Union.

The consortium that won the grant under topic HORIZON-CL5-2021-D3-01-04 is uniquely placed to submit a proposal to continue the envisioned partnership. With regards to the various activities already undertaken in previous years, no other consortium is able to continue the activities of the Partnership underway without a significant disruption of the ongoing activities.

While the grant under this topic should be attributed to a proposal submitted by the coordinator of the consortium funded under topic HORIZON-CL5-2021-D3-01-04, the consortium applying to the present topic may include additional partners and new activities, to be funded by the grant subject to an evaluation, which will take into account the existing context and the scope of the initial evaluation (as relevant), and related obligations enshrined in the grant agreement.

HORIZON-CL5-2025-02-D2-11: Support to the SET Plan community

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 0.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply: Only up to one project will be funded in each of the following sectors:

¹²⁵

[REPowerEU: affordable, secure and sustainable energy for Europe | European Commission \(europa.eu\)](https://ec.europa.eu/energy/en/repowereu)

	<ul style="list-style-type: none"> • geothermal energy • hydropower • ocean energy • photovoltaics • renewable fuels and bioenergy • solar thermal energy • renewable heating and cooling • direct solar fuels • wind energy • energy efficiency in buildings • sustainable and efficient energy use in industry • direct current technologies • carbon capture storage and use • hydrogen • energy systems
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>As the presently ongoing actions supporting the SET Plan in the above-mentioned sectors will end on different dates, the contractual start dates of new actions under this topic shall be set specifically to avoid any overlap exceeding one month.</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹²⁶</p>

Expected Outcome: In 2015, the launch of the Energy Union saw the SET Plan (Strategic Energy Technology Plan) incorporated as the Energy Union’s fifth pillar on ‘Research, Innovation and Competitiveness’. With the 2023 Communication on the revision of the SET

¹²⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Plan, its strategic objectives were harmonised with the European Green Deal, REPowerEU and the Green Deal Industrial Plan. Moreover, the SET Plan became a structural policy under the European Research Area. In 2024, the SET Plan was enshrined in the Net Zero Industry Act and the SET Plan Steering Group was established as a high-level expert group.

Depending on the sector, European Technology and Innovation Platforms (ETIPs), and/or SET Plan Implementation Working Groups (IWGs) and/or similar stakeholder fora support the development and implementation of the SET Plan priorities by bringing together relevant stakeholders in key areas from industry, research organisations and, where applicable, SET Plan countries' government representatives.

It is crucial for the clean energy transition that the SET Plan stakeholder fora align and coordinate their activities.

Project results are expected to contribute to all of the following outcomes:

- European climate and energy policies are supported by science-based evidence.
- The implementation of the SET Plan and its contribution to the Green Deal Industrial Plan, the Net Zero Industry Act and the European Research Area are facilitated.
- The SET Plan stakeholder fora are recognised as key players in the clean energy transition.
- The societal and economic effects of the clean energy transition are addressed through the consideration of interests, needs and concerns of end users and actors across the value chain of the respective technology sectors.

Scope: The projects are expected to support ETIPs and/or IWGs and/or stakeholder fora in one of the sectors listed below, taking into consideration the specific needs of the sector they address, the emerging European policy priorities, and the coordination with other initiatives (to avoid overlaps).

The proposals are expected to address one of the following sectors: geothermal energy, hydropower, ocean energy, photovoltaics, renewable fuels and bioenergy, solar thermal energy, renewable heating and cooling, direct solar fuels, wind energy, energy efficiency in buildings, sustainable and efficient energy use in industry, direct current technologies, carbon capture storage and use, hydrogen, and energy systems.

In line with the Recovery Plan for Europe and the latest EU climate and energy related policies (notably the National Energy and Climate Plans), stakeholder fora are expected to develop research and innovation roadmaps and/or analyses (e.g., strategic research and innovation agendas, strategic reports, industrial strategies, analyses of market opportunities and funding needs, studies on innovation barriers, assessments of their sectors' contribution to the European competitiveness and strategic autonomy). Special attention should be given, as appropriate, to the key challenges of the European Green Deal, the Green Deal Industrial Plan and the Net Zero Industry Act, including (but not limited to) energy security, technological

pushback, industrial production and competitiveness, supply chain security and dependencies, access to market, circularity, advanced materials, digitalisation, societal transformation, skills, and just transition. Moreover, as appropriate, the projects are expected to address the contribution to the goals of the European Research Area in the field of energy, in particular the achievement of the 3% GDP target of public and private spending on research and innovation.

The stakeholder fora should ensure the participation of industrial players (including SMEs), research and civil society organisations, universities and European associations representing relevant sectors (as applicable) across several SET Plan countries, establishing links with national authorities. To maximise impact, the projects are encouraged to develop and implement robust outreach approaches to widen participation from across the EU and associated countries. As appropriate, societal needs and interests should be considered in the activities of the fora, so that inequalities and employment issues are addressed. Where applicable, the stakeholder fora should establish synergies with relevant Horizon Europe European Partnerships.

The projects are encouraged to implement dissemination and networking activities with other relevant projects (e.g., joint workshops, thematic conferences, webinar series, regular exchanges, etc.).

Relevant outputs of the projects will feed into the SET Plan information system (SETIS), the annual SET Plan progress report and the Commission's Clean Energy Technology Observatory. As appropriate, the projects should provide data and analysis tracking the progress of the different technologies towards the EU targets, for instance those set out by the Net Zero Industry Act (e.g., the implementation of non-price criteria), the Critical Raw Materials Act, and the Renewable Energy Directive (e.g., the target for innovative renewable energy technologies to represent at least 5 % of newly installed renewable energy capacity by 2030). Data should be accessible and reusable according to the FAIR data principles (Findable, Accessible, Reusable, Interoperable). The projects are expected to contribute to the reporting of the SET Plan to the European Parliament and the Council.

The projects should prepare new (or update existing) finance and sustainability plans for future continuation of the stakeholder fora without EU funding.

If relevant, this topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, to produce meaningful and significant effects enhancing the societal impact of the related research activities.

The indicative project duration is two years.

HORIZON-CL5-2025-02-D2-12: NZIA regulatory sandbox exchange forum support

Call: Cluster 5 Call 02-2025 (WP 2025)

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 0.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 0.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹²⁷.</p>

Expected Outcome: The framework of measures for strengthening Europe’s net-zero technology manufacturing ecosystem (Net-Zero Industry Act) was adopted¹²⁸ in 2024, establishing a requirement for Member States to set up net-zero regulatory sandboxes¹²⁹ in order to promote innovation and regulatory learning in the field of net-zero technologies. This instrument allows for testing of innovative net-zero technologies in real-world environment for a limited amount of time and with a view of potential scaling up and further wider deployment. Those innovative technologies could eventually be essential to achieve the Union’s climate neutrality objective and to ensure the security of supply and resilience of the Union’s energy system. Regulatory sandboxes contribute to better regulation¹³⁰ and to the New European Innovation Agenda’s¹³¹ flagship on experimentation spaces.

According to the Regulation, Member States designate one or more contact points for setting up net zero regulatory sandboxes and the net zero Europe Platform is assigned to coordinate Member States’ activities and cooperation on net zero regulatory sandboxes. For the wider and accelerated deployment of innovative net-zero technologies it is crucial that the assigned contact points and competent authorities coordinate their activities, exchange information on

¹²⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/lis-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/lis-decision_he_en.pdf

¹²⁸ Regulation (EU) 2024/1735 of the European Parliament and of the Council on establishing a framework of measures for strengthening Europe’s net-zero technology manufacturing ecosystem and amending Regulation (EU) 2018/1724

¹²⁹ It means a scheme that enables undertakings to test innovative net-zero technologies and other innovative technologies in a controlled real-world environment, under a specific plan, developed and monitored by a competent authority

¹³⁰ Tool 69 of better regulation toolbox of the European Commission.

¹³¹ COM(2022) 332 of 5.7.2022

lessons learnt and good practices and cooperate, including possible cross-border implementation.

Project results are expected to contribute to all of the following outcomes:

- Regulatory learning of how regulation supports or hampers the enhanced use of innovative net-zero technologies;
- Net zero regulatory sandboxes schemes are well established, streamlined and designed;
- The net zero Europe Platform actively and smoothly exchanges information among Member States (contact points and competent authorities) and stakeholders thanks to the support of the project.

Scope: Covering all of the following points proposals are expected to:

1. Provide support to the goals of the net zero Europe Platform related to net zero regulatory sandboxes and to reach out to stakeholders involved in net zero regulatory sandboxes across Member States (including assigned contact points, competent authorities, potential participating entities, including SMEs and start-ups, social partners, consumers and other stakeholders). They should support exchanging best practices, lessons learnt and enhancing cooperation between Member States, as well as the coordination with other similar initiatives.
2. Prepare comparative analyses and assessments of the national legislative frameworks for net zero regulatory sandboxes and other regulatory sandboxes relevant for innovative net zero technologies in line with the Regulation on strengthening Europe's net-zero technology manufacturing ecosystem:
 - o on regulatory barriers for innovative net zero technologies;
 - o on national net-zero regulatory sandbox schemes (including application procedures);
 - o on concrete trials;
 - o on impacts and regulatory learning;
 - o on lessons learnt
 - o and explore other forms of regulatory experimentation for net zero technologies in the energy sector.
3. Create and regularly update a publicly available free repository on regulatory sandbox schemes and concrete projects for net zero technologies in the Union.

Proposals actively include the contribution of national and regional authorities, companies (industry and SMEs), social partners, research and civil society organisations, consumers' and users' associations, universities and European associations representing relevant sectors and

any other stakeholders related to net zero regulatory sandboxes. To maximise their impact and widen participation, they are encouraged to develop and implement robust outreach approaches and societal engagement actions to span across the EU.

Proposals are expected to include appropriate means to particularly take into account the experience and possibilities of SMEs and start-ups as potential participants in regulatory sandbox schemes fostering innovation and regulatory learning.

Furthermore, the proposals should develop a dissemination and exploitation strategy and implement dissemination and networking activities.

The project is expected to contribute to the Commission's reporting on the results of the implementation of net-zero regulatory sandboxes (including good practices, lessons learnt and recommendations on their setup and, on the application, within the net-zero regulatory sandbox of Union law in a manner adapted for the purposes of the net-zero regulatory sandbox).

Proposals submitted under this topic are expected to include actions designed to ensure the accessibility and reusability of data produced during the project. The project should include a finance and sustainability plan for future continuation beyond the lifetime of the project.

Projects should be designed for a duration of three years.

Sustainable, secure and competitive energy supply

This Destination includes activities targeting a sustainable, secure and competitive energy supply. In line with the scope of cluster 5, this includes activities in the areas of renewable energy; energy system, grids and storage; as well as Carbon Capture, Utilisation and Storage (CCUS).

This Destination contributes directly to the Strategic Plan's **Key Strategic Orientations** 'Green transition', 'Digital transition' and 'A more resilient, competitive, inclusive and democratic Europe'.

In line with the Strategic Plan, the overall **expected impact** of this Destination is to contribute to the '*Ensuring more sustainable, secure and competitive energy supply through solutions for smart energy systems based on renewable energy solutions*'.

This destination contributes to the activities of the Strategic Energy Technology Plan (SET Plan) and its implementation working groups.

The main impacts to be generated by topics under this Destination are:

Renewable energy

1. Energy producers have access to competitive European renewable energy and renewable fuel technologies and deploy them to enhance the EU's energy security. This will contribute to the 2030 "Fit for 55" targets (in particular, at least 42.5% renewable energy share and aiming for 45% in the EU energy consumption, 5.5% advanced biofuels and renewable fuels of non-biological origin share in EU fuel consumption). It will also contribute to the indicative target of at least 5% innovative renewable energy technology for the newly installed renewable energy capacity. By 2050, climate neutrality in the energy sector will be achieved in a sustainable way in environmental (e.g., biodiversity, multiple uses of land and water, natural resources, pollution) and socioeconomic terms, and in line with the Sustainable Development Goals.
2. Technology providers have access to European, reliable, sustainable, and affordable value chains of renewable energy and renewable fuel technologies.
3. Economic sectors benefit from better integration of renewable energy and renewable fuel-based solutions that are among others cost-effective, efficient, flexible, reliable, and sustainable. Such integration is facilitated by digital technologies and by renewable energy technologies that provide network stability and reliability.
4. European researchers benefit from a stronger community and from a reinforced scientific basis on renewable energy and renewable fuel technologies, also through international collaborations.
5. European industries benefit from a reinforced export potential of renewable energy and renewable fuel technologies, also through international collaborations.

6. European industries become frontrunners and maintain technological leadership in innovative renewable energy technologies in line with the energy union strategy.
7. European citizens, including disadvantaged and vulnerable groups, have access to an energy market that is affordable, fair and equitable, more resilient, uses all different types of local renewable energy resources, and is less dependent on fossil fuels. Local communities benefit from a more decentralised and secure energy system and from multiple uses of land and water. Less citizens experience fuel and energy poverty.
8. Strategic Energy Technology Plan (SET Plan) implementation working groups on solar photovoltaics, solar thermal technologies, renewable fuels and bioenergy, wind energy, geothermal energy, and ocean energy benefit from a reinforced scientific basis and collaboration on renewable energy and renewable fuel technologies towards meeting the ambitious targets of the European Green Deal.

Energy systems, grids & storage

R&I actions will support the just digital and green transformation of the energy system through advanced solutions for accelerating the energy systems integration and decarbonisation. The developed clean, sustainable solutions will contribute to making the energy system and supply more reliable, resilient, and secure. The solutions will contribute to increase flexibility and grid hosting capacity for renewables through optimising cross sector integration and grid scale storage. They will enhance the competitiveness of the European value chain, reduce pressure on resources (also by making technologies ‘circular by design’) and decrease dependencies.

Innovative and cost-effective energy storage (integration) solutions are developed, that provide flexibility to the energy system, reduce total cost of grid operation and enhancement and that minimise the use of critical raw materials and ensure, to the best extent possible, their reuse and recycling, are key elements of the energy system.

Carbon capture, use and storage (CCUS) and carbon dioxide removal (CDR)

1. Accelerated development of carbon capture, use and storage (CCUS) as a CO₂ emission mitigation option in electricity generation, in industry applications and carbon dioxide removal technologies (including conversion of CO₂ to energy products).
2. Reduced EU’s dependency on imported fossil fuels and increased energy security, reduced energy system’s vulnerability to the impacts of the changing climate.

Global leadership in renewable energy

Proposals are invited against the following topic(s):

HORIZON-CL5-2026-02-D3-01: Large-scale production of liquid advanced biofuels and renewable fuels of non-biological origin

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 11.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 33.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio, grants will be awarded to proposals not only in order of ranking but at least also to one proposal that is the highest ranked within the area of liquid advanced biofuels and at least also to one proposal that is the highest ranked within the area of liquid renewable fuels of non-biological origin, provided that proposals attain all thresholds (and subject to available budget). This condition to ensure a balanced portfolio will also be considered to be met if a proposal addressing both areas is funded.</p>

Expected Outcome: A quite wide portfolio of technologies, which are close to be deployed but still lack the real-world demonstration of economic viability, exists. Significant volumes of advanced biofuels and renewable fuels of non-biological origin (RFNBOs) are needed to cover the current fleets and the sectors where renewable fuels are the main long-term solution, such as aviation and shipping and energy-intensive industries. Therefore, an exceptional effort is needed to establish more successful projects where full-scale plants are built and operated based on the vast potential of sustainable feedstocks throughout the EU.

Project results are expected to contribute to all of the following expected outcomes:

- Energy producers and consumers in transport and energy-intensive industries benefit from the mobilisation of building of industrial capacity for advanced biofuels and renewable fuels of non-biological origin;

- Technology developers benefit from the support to the preparation of first-of-a-kind plants of advanced biofuels and/or renewable fuels of non-biological origin to become precursors for the following commercial plants;
- Technology providers benefit from the de-risking of the innovative technologies, reduction of CAPEX and production costs, boosting of scale-up and contribution to market up-take of advanced biofuels and/or renewable fuels of non-biological origin;
- Public authorities, citizens, researchers, and industrial stakeholders benefit from the improvement of the sustainability, reliability, robustness, and security of the relevant value chain;
- National authorities profit from the provided evidence for innovative advanced biofuels and/or renewable fuels of non-biological origin technologies, which can contribute to the Renewable Energy Directive indicative target for innovative renewable energy technology in each Member State of at least 5 % of newly installed renewable energy capacity by 2030, as well as to the targets under ReFuelEU Aviation and FuelEU Maritime.
- Policy makers and regulators profit from the provided factual information and evidence in view of their decision as regards accelerating permitting procedures, harvesting benefits from multiple uses of land and water and increasing the responsiveness of research and innovation in that field to diverse societal interests and concerns;
- The implementation of the Strategic Energy Technology Plan (SET Plan) Action for Renewable Fuels and Bioenergy is supported and facilitated.

Scope: Demonstrate innovative large-scale production of liquid advanced biofuels and/or renewable fuels of non-biological origin for sectors with specific need for such fuels (particularly aviation and shipping and energy-intensive industries). Production is expected to be based on various EU sustainable biomass feedstocks, notably biogenic residues and wastes, biogenic part of slurries and industrial wastes, and/or on non-biological origin feedstocks, such as renewable hydrogen and CO₂ or renewable carbon, nitrogen, or their compounds, through chemical, biochemical, biological, and thermochemical pathways, or a combination of them. Proposals are expected to:

- demonstrate large scale production of ready-to-deploy advanced biofuels and/or renewable fuels of non-biological origin, engaging feedstock developers and suppliers, technology developers, fuel suppliers, end users for purchasing the quantities, national bodies, and public or private authorities with funding capacity;
- address and assess the impact of actual, real-size feedstocks, (like for example agricultural wastes, energy crops grown on marginal and degraded lands or as intermediate crops, forestry wastes, biogenic municipal and industrial wastes, all types of renewable hydrogen, actual streams of CO₂ and nitrogen, available renewable carbon or

their compounds), in terms of their constitution on plant design, (e.g. for feedstock pretreatment and wastewater treatment as appropriate);

- address and assess the impact on plant design and feasibility of improving the feedstocks externally and upstream to the fuel production plant, by increasing the energy density of the feedstocks through for example torrefaction, by homogenisation of feedstocks for making them uniform or similar, and by standardisation of feedstocks, as appropriate.

Projects should produce a lifetime cycle analysis of their production route and in particular for renewable fuels of non-biological origin, as inputs in terms of renewable energy and material (CO₂, nitrogen, renewable hydrogen) may not be continuously available.

Production of renewable hydrogen as an end-product is excluded from the scope of this topic.

The projects are expected to result in reference cases for ready-to-build, revamp/reuse and/or operate full-scale plants of advanced biofuels and/or renewable fuels of non-biological origin. Improvements, optimisation, new schemes and modification of existing demonstration plants that can result into the preparation of the next full-scale plant are considered within scope to encourage deployment of cost-effective solutions.

The plan for the exploitation and dissemination of results should include a strong investment and business case and sound exploitation strategy. The exploitation plan should include plans for scalability, commercialisation, and deployment. It is expected to provide information and assessment about the economic viability of the commercial plant, the permitting procedures, a full value chain-based business plan and identified funding sources such as private equity, loans, loans guarantee, grants, or public financing for CAPEX and OPEX, as well as take-off agreements for the fuel uptake. Moreover, they should provide information on, or linked to, the identified funding sources, like private equity, the InvestEU, the EU Catalyst Partnership, the Innovation Fund, and possibly the European Regional Development Fund programmes. Projects are expected to include at least one relevant local economic business case, outlining local value and supply chains and the expected number of local jobs at the place of deployment. Furthermore, proposals are expected to provide information and assessment of impact on land and water use, soil and biodiversity, for example in relation to marginal and degraded land feedstocks, and of public awareness on full-scale renewable fuel plants.

An assessment of the sustainability and the GHG reduction from fossil equivalents should be shown based on a life-cycle analysis for the large-scale fuel production. Special attention should be paid to estimating the GHG emissions reduction potential; projects are encouraged to use the methodology in the Innovation Fund.

HORIZON-CL5-2026-02-D3-02: Competitiveness, energy security and integration aspects of advanced biofuels and renewable fuels of non-biological origin value chains

Call: Cluster 5 Call 02-2026 (WP 2025)
Specific conditions

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹³² .

Expected Outcome: European energy security and industrial competitiveness are contested by the geopolitical circumstances and market situations around the world. Advanced biofuels and renewable fuels of non-biological origin are in EU's portfolio of technologies that contribute to net-zero manufacturing in Europe. However, remaining challenges impacting the security of supply and competitiveness of these technologies and the integration of their value chains need to be clearly understood, presented, and mitigated.

Project results are expected to contribute to all of the following expected outcomes:

- Energy consumers benefit from the contribution to improved EU energy security and industrial competitiveness of renewable fuel technologies;
- Energy producers and consumers benefit from the improved reliability, robustness and security of renewable fuel technologies (compared to existing ones);
- Diverse stakeholders, e.g., policy makers, public authorities, citizens, researchers, and industry, profit from the enhancement of common knowledge and understanding about existing opportunities of integrated value chains for advanced biofuels and renewable fuels of non-biological origin;
- Multi stakeholders, e.g., policy makers, technology developers, researchers, industrial and any other relevant stakeholders to the value chain, profit from the generation of

¹³² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

multi benefits of promoting sustainable development and sustainable agriculture regarding climate change resilience and regenerative practices, accelerating renewable fuel innovation, and maximising carbon removals.

Scope: Projects are expected to assess the energy security and industrial competitiveness aspects of value chains for advanced biofuels and renewable fuels of non-biological origin, in view of the new situation in the EU regarding energy security and industrial competitiveness with the rest of the world. They are expected to also evaluate how these technologies could contribute to the EU's energy security and industrial competitiveness through detailed value chain analysis and development of future scenarios, macroeconomic modelling, and strategic decision-making methods. Value chains closer to commercialisation with the potential to contribute more to the EU 2030 targets for green transition and industrial competitiveness and value chains for technologies under development with the potential to contribute to the longer term and could duly adopt mitigation measures, are both in scope. Proposals are expected to identify the research and innovation actions needed to improve the energy security and industrial competitiveness aspects of these value chains, and implement as appropriate research activities for such optimisation, as well as new standards definitions for advanced biofuels and RFNBOs as appropriate.

Competitiveness, energy security and integration challenges of the various steps in a value chain and of the relevant stakeholders are expected to be addressed. Integration aspects encompass every step of each individual value chain and every stakeholder. Proposals are expected to coordinate efforts towards development of win-win integrated solutions of sustainable value chains for advanced biofuels and renewable fuels of non-biological origin engaging all relevant stakeholders, including as relevant farmers, CO₂ suppliers, technology providers, researchers, fuel producers, end users, policy makers, international organisations. Multidisciplinary issues related to advanced biofuels and renewable fuels of non-biological origin production, carbon removals, CO₂ trading and valorisation, sustainable farming, production of nature-based soil amendments, fertilizers, and organic materials, fuel standardisation, trade-off/synergies of carbon farming with in-situ carbon storing and of land uses for fuels versus solar panels for derived fuels, are expected to be considered, to achieve benefits for all through the integration.

Value chains of renewable hydrogen as an end-product are not within the scope of this topic.

A sustainability assessment of integrated solutions including techno-economic, environmental and social aspects is expected to be carried out based on life cycle analysis.

HORIZON-CL5-2025-02-D3-03: Novel approaches to geothermal resources development

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU</i>	The Commission estimates that an EU contribution of around EUR 10.00

<i>contribution per project</i>	million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio, grants will be awarded to proposals not only in order of ranking but at least also to one proposal that is the highest ranked within the area of shallow & low/mid enthalpy geothermal (0-500 m depth and temperature below 150°C) and at least also to one proposal that is the highest ranked within the area of deep & high enthalpy geothermal (above 500 m depth and temperature above 150°C), provided that proposals attain all thresholds (and subject to available budget). This condition to ensure a balanced portfolio will also be considered to be met if a proposal addressing both areas is funded.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Developers and energy providers benefit from de-risking and cost reduction of geothermal resource development;
- Citizens benefit from energy efficient, sustainable, generation of electricity, direct heat, and/or heating and cooling from geothermal resources in a wide range of geological settings;
- Technology leadership, competitiveness, and technology export potential of European industry in the geothermal energy supply chain are increased;
- The technological innovation is environmentally sound, aligned with societal values, norms and behavioural aspects of end users and actors across the whole geothermal value chain, improving energy justice and citizenship.

Scope: Proposals should focus on the demonstration of innovative approaches to resource development in: (i) the area of shallow & low/mid enthalpy geothermal (0-500 meter-depth and temperature below 150°C) and/or (ii) in the area of deep & high enthalpy geothermal (beyond 500 meter-depth and temperature above 150°C). Proposals should also expressly identify whether they are addressing the area of (i) shallow geothermal; (ii) deep geothermal; or (iii) both shallow and deep geothermal.

Drilling and subsurface engineering account for a large part of the costs of geothermal projects, and on-field project development contains significant risks due to inherent geological uncertainties. Reducing costs upfront, improving performance, estimating uncertainty, and reducing risk can therefore boost the geothermal capacity deployment rate.

The scope covers advances beyond the state of the art in one/several of the following points:

- subsurface engineering;
- well design, drilling and completion;
- reservoir characterisation and development planning.

Proposals should include one or more of the following: robot and AI-physics-based simulation solutions for geothermal resource development, novel cost-efficient drilling methods and equipment, advanced drilling fluids, new materials for casing, cementing and completion, working fluids, logging while drilling, wireline technologies and geosteering high temperature electronics, well architecture and stimulation, closed loop technology, enhanced production pumps, and innovative monitoring systems during geothermal resources exploitation including their integration in digital twins.

Proposals are expected to reduce project development time while ensuring safety of operations and adaptation to specific geothermal environments (including offshore), constraining and quantifying geological uncertainties, reducing field development and seismic risks. They can include standardisation of the drilling equipment enhanced well production, enhanced environmental performance, improve component resistance to corrosion, scaling, high temperature, wear, and mechanical failures, increase energy extraction.

The project must include a clear go/no-go milestone ahead of entering the demonstration phase of the project. Before this go/no-go milestone, delivery of the detailed engineering plans, a techno-economic assessment, and all needed permits for the demonstrator should be foreseen. The project proposal is expected to present a clear and convincing pathway and timeline to obtaining the permits.

Environmental impact of the proposal should be assessed, and mitigation measures considered.

Where relevant, the project is expected to follow FAIR data principles, adopt data quality standards, data integration operating procedures and GDPR-compliant data sharing/access good practices developed by the European research infrastructures.

In order to enhance the benefits of the technology, proposals are expected to develop understandings of how the utilisation of geothermal resources aligns with the cultural values and contextual settings at local to regional level and increase the responsiveness of geothermal energy to diverse societal interests and concerns. To achieve that, an inclusive, early and continuous societal engagement should be enhanced.

In particular, this topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise (applied to social innovation), in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

HORIZON-CL5-2025-02-D3-04: Development of hydropower technologies and water management schemes allowing for win-win situation of flexible hydropower and biodiversity improvement – Societal Readiness Pilot

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹³³ .
<i>Exceptional page limits to proposals/applications</i>	The page limit of the application is extended by two pages to 52 to properly address Societal Readiness-related issues.

¹³³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Expected Outcome: For a renewables-based electricity system sufficiently flexible and also in the long-run highly sustainable hydropower capacity is pivotal.

Project results are expected to contribute to some of the following expected outcomes, to the benefit of hydropower operators and technology providers:

- Enhanced capacity and flexibility of the hydropower fleet to contribute to renewable energy systems and management of water flows;
- Increased technology leadership, competitiveness, and technology export potential of the European hydropower industry;
- Enhanced sustainability of hydropower with positive effects on river ecosystems and biodiversity, and considering adaptation to climate change;
- Responsiveness to a deeper understanding of the needs and concerns of diverse social groups, citizens and civil society at large involved in or potentially affected by the R&I development, thereby increasing the potential for beneficial societal uptake and building trust in results and outcomes.

Scope: Proposals are expected to develop hydropower technology solutions or improved water management schemes or a combination of both, which allow for synergies between flexible hydropower energy generation and local ecosystem management for existing run-of-river hydropower or reservoir hydropower plants or cascades of such plants, which are connected to the grid. To achieve this objective, thematic areas like e.g., hydropeaking, floodplain biotopes, sediment transport and/or river morphology restoration and environmentally efficient water flows also considering effects of climate change, can be addressed. Societal needs and the participation of local communities in decision processes in view of trust building should be considered.

Developed solutions are expected to enhance the flexibility of hydropower generation according to current and expected power grid needs and water availability, while being highly sustainable and creating positive impacts on river ecosystems and biodiversity, through e.g., equipment, material and digital innovation, nature-inclusive design, ecosystem restoration solutions, innovative and sustainable reservoir and water flow operation and management. Developed solution should not reduce the hydropower generation efficiency and equipment functionality while improving the environmental performances arising from this in a win-win optimisation. Respective impacts for both, energy and biodiversity should be assessed. Research and Innovation on pumped storage hydropower as well as on water management schemes not related to hydropower or not directly connected to natural water bodies is excluded from this topic.

This topic is a Societal-Readiness pilot:

- Proposals should follow the instructions applying to the Societal readiness pilot, as described in the introduction of the Horizon Europe Main Work Programme 2025 for

Climate, Energy and Mobility. They entail the use of an interdisciplinary approach to deepening consideration and responsiveness of research and innovation activities to societal needs and concerns.

- This topic requires effective contribution of the relevant SSH expertise, including the involvement of SSH experts in the consortium, to meaningfully support Societal Readiness. Specifically, SSH expertise is expected to facilitate the socio-technological interface and enable the design of project objectives with Societal Readiness related activities.

HORIZON-CL5-2026-02-D3-05: Demonstration of thermal energy storage solutions for solar thermal plants and systems

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio, grants will be awarded to proposals not only in order of ranking but at least also to one proposal that is the highest ranked within the area of concentrated solar power (CSP) and at least also to one proposal that is the highest ranked within the area of solar thermal heat and/or cold, provided that proposals attain all thresholds (and subject to available budget). This condition to ensure a balanced portfolio will also be considered to be met if a proposal addressing both areas is funded.</p>

Expected Outcome: Project results are expected to contribute to some of the following expected outcomes:

- Significant reduction of LCOHS (Levelised Cost of Heat Storage) and/or LCOE (Levelised Cost of Energy);

- Technology providers profit from successful demonstration and de-risking of thermal energy storage solutions that improve the dispatchability of solar thermal plants and/or systems;
- Technology providers have improved access to financing through better understanding of the bankability of dispatchable solar thermal solutions;
- Electricity grid operators have access to reliable options to cope with the increase in the share of variable-output renewables and reduce curtailments;
- The execution of the solar thermal implementation plan of the Strategic Energy Technology Plan (SET Plan) is supported and facilitated;
- The execution of the solar energy joint research and innovation agenda¹³⁴ is supported and facilitated.

Scope: Support will be given to the demonstration of innovative thermal energy storage solutions in the following areas: (i) concentrated solar power (CSP) and/or (ii) solar thermal heat and/or cold.

The proposed solutions will have to achieve substantial improvements in terms of performance, cost-effectiveness and life span compared to the current state of the art.

The project must include a clear go/no-go milestone ahead of entering the demonstration phase. Before this go/no-go milestone, the project must deliver the detailed engineering plans, a techno-economic assessment, and all needed permits for the demonstrator. The project proposal is expected to present a clear and convincing pathway and timeline to obtaining the permits.

The project has to assess the sustainability of the proposed solutions in environmental and socio-economic terms. Furthermore, the Commission initiative for Safe and Sustainable by Design¹³⁵ (SSbD) sets a framework for assessing the safety and sustainability of chemicals and materials which should be considered as a reference for project proposals.

Plans for the exploitation and dissemination of results for proposals submitted under this topic are expected to include a strong business case and sound exploitation strategy. The exploitation plans are expected to include preliminary plans for scalability, commercialisation, and deployment (feasibility study, business plan) indicating the possible funding sources to be potentially used (in particular the Innovation Fund).

HORIZON-CL5-2025-02-D3-06: Innovative manufacturing of wind energy technologies

Call: Cluster 5 Call 02-2025 (WP 2025)

¹³⁴ https://research-and-innovation.ec.europa.eu/document/download/3acfa717-b321-4f7d-b8c3-765f507d7de2_en?filename=ec_rtd_swd-2024-160-fl.pdf

¹³⁵ https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/key-enabling-technologies/chemicals-and-advanced-materials_en

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 28.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹³⁶.</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Energy consumers have access to affordable, clean, and secure energy with lower environmental impacts and improved health and safety working conditions along the entire value chain;
- The European wind energy supply chain strengthens its strategic autonomy, technology leadership, competitiveness, and technology export potential;
- The deployment of wind energy in Europe is facilitated thanks to innovations enabling large-volume manufacturing therefore contributing to the achievement of the Net Zero Industry Act.

Scope: Proposals are expected to address at least three of the following aspects:

- Develop and demonstrate innovative wind energy manufacturing technologies that improve the health and safety working conditions of staff along the supply chain;

¹³⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Develop and demonstrate innovative wind energy manufacturing technologies that allow for reduced energy and material consumption, increased circularity, lower costs and decreased pollution;
- Develop and demonstrate automated and/or semi-automated manufacturing solutions that ensure high-quality products, high productivity, increase the lifetime and the reliability of wind energy systems;
- Develop and demonstrate manufacturing solutions for wind energy technologies that allow for high production throughput, optimisation of logistics and transport of components and reduced impacts on the environment, cultural heritage, landscapes and people.

The project could, for instance, support the development of innovative manufacturing solutions for onshore and/or offshore wind energy production, including airborne wind energy. It could focus on specific components of a wind energy system (e.g., blades, nacelles and towers, gearboxes, foundations, generators, floaters, mooring systems, anchors, kites, etc.).

The project should analyse and report on the potential for standardisation of the solutions developed, as well as on possible connections with ongoing standardisation efforts.

The project must include a clear go/no-go milestone ahead of entering the demonstration phase. Before this go/no-go milestone, the project must deliver the detailed engineering plans, a techno-economic assessment, and all needed permits for the demonstrator. The project proposal is expected to present a clear and convincing pathway and timeline to obtaining the permits.

The project must assess the sustainability of the proposed solutions in environmental and socio-economic terms.

The demonstration must be at a realistic, representative scale and must cover a continuous interval of at least six months.

When developing improvements along the supply chain to improve the health and safety working conditions, projects must give special consideration to the gender dimension.

Whenever the expected exploitation of project results entails developing, creating, manufacturing and marketing a product or process, or in creating and providing a service, the plan for the exploitation and dissemination of results must include a strategy for such exploitation. The exploitation plan should include preliminary plans for scalability, commercialisation, and deployment (feasibility study, business plan) indicating the possible funding sources to be potentially used (in particular the Innovation Fund).

HORIZON-CL5-2026-02-D3-07: Improved reliability and optimised operations and maintenance for wind energy systems

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹³⁷ .

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Limit the risks related to wind energy systems (e.g., operational, financial, climate) and thus reduce the wind energy projects' uncertainties;
- The European wind energy supply chain strengthens its strategic autonomy, technology leadership, competitiveness, and technology export potential.

Scope: Proposals are expected to address at least four of the following aspects:

¹³⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Develop and validate solutions to increase the reliability of wind energy systems and their components, thus ensuring security of supply and further reducing the environmental impacts;
- Develop new methods, computational techniques and tools to analyse and predict the reliability of wind energy systems, considering the analysis of the failure modes of existing systems and including a focus on new analytical approaches, technologies and materials;
- Develop new methods and tools for condition and health monitoring of wind energy systems and their components;
- Develop and validate solutions to optimise the operation and maintenance of wind energy systems and their components, for example through improved scheduling and predictive maintenance, autonomous tools, robots and vehicles, semi-automated inspection methods or advanced repair methods;
- Develop and validate new components to be incorporated in structures' designs to improve the safety and efficiency on-site during maintenance activities in wind farms;
- Develop and validate innovative digital tools to facilitate wind farm operation and maintenance, for instance through improved interoperability, decision-making support tools, condition and health monitoring techniques and innovative sensors, while ensuring increased cybersecurity and data sharing.

The solutions proposed have to provide solid evidence to support the choice of the sub-systems and components in focus. They have to be critical for the overall reliability of the wind energy systems. For instance, in the case of floating offshore wind, these could be dynamic cables, moorings and connection systems (electrical and mechanical) and their interaction with complex ocean flows.

Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

Digitalisation plays a prominent role under various perspectives, for instance in terms of improved predictive maintenance activities and advanced sensors technologies for diagnostics, condition and health monitoring of the power electronics, and structural health assessment and monitoring.

Projects should aim at reducing downtime and operational costs, enhancing safety protocols for maintenance crews, and increasing the overall lifespan and efficiency of wind energy assets.

These solutions should be easily standardised and/or should take into account current standardisation efforts, notwithstanding the TRL level envisaged for the projects developed under this topic.

HORIZON-CL5-2026-02-D3-08: Understand and minimise the environmental impacts of offshore wind energy

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering multiple geographical areas, grants will be awarded to applications not only in order of ranking, but priority will be given to high-ranking proposals that ensure, collectively, the best coverage of the different European sea basins (Atlantic Ocean, Baltic Sea, Black Sea, North Sea and Mediterranean Sea), provided that the proposals attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹³⁸.</p>

Expected Outcome: The EU's Offshore Strategy¹³⁹ underlines that the deployment of offshore wind should be based on maritime spatial planning, assessing the economic, social, and environmental sustainability of the installations in a life-cycle perspective, while ensuring co-existence with other activities such as commercial and recreational uses of the sea and fishing. At the same time, it calls for research on the cumulative impacts of offshore energy

¹³⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹³⁹ COM(2020) 741 final

generation on the environment, which was also underlined in the Communication on Delivering on the EU offshore renewable energy ambitions (2023)¹⁴⁰.

Our knowledge on such impacts, positive and negative, is more advanced now than when the Offshore Strategy was adopted¹⁴¹. However, there are still significant data and knowledge gaps. Most fieldwork studies have been carried out at very localised sites and often focused on specific species. These ad-hoc studies lead to conclusions that can hardly be generalised. A sound monitoring, measuring multiple pressures and impacts on ecosystems and their services, at wider scale and in interaction with other sea activities, is still largely missing. There is also a need to further develop models and other instruments for environmental risk assessment, identification of mitigation measures and recommendations for restoration measures, considering impacts during construction, operation and maintenance, repowering and decommissioning.

Improving instruments, data, and knowledge on the cumulative environmental impacts of offshore energy, as well as a sound monitoring, is key to ensure that its expected fast and large-scale deployment will be sustainable. It will also better equip the EU to contribute to mitigate such impacts and promote sustainable deployment of offshore wind at regional (e.g., through OSPAR¹⁴² in the Northeast Atlantic) or subregional (e.g., through the Greater North Sea basin Initiative) level.

Project results are expected to contribute to all of the following expected outcomes:

- The scientific community, public authorities, project designers, permitting authorities, civil society organisations and citizens have better tools (including Maritime Spatial Planning tools), reliable data and knowledge to monitor, assess and minimise the cumulative environmental, including on biodiversity, and socio-ecological impacts of large-scale bottom-fixed and floating offshore wind energy generation, including at sea-basin level and when combined with other planned or existing human activities;
- The monitoring of cumulative environmental impacts, including on biodiversity, of offshore wind installations is improved, with better tools and open data, in a coherent scheme with pre-existing monitoring programs of the marine environment at large scale;
- Ambitious national and regional offshore wind deployment targets are achieved with positive or minimum negative impacts on the marine and coastal environment;
- Deploy offshore wind energy with minimal impact on marine and coastal ecosystems, and, if possible, with net-positive ones.

Scope: Proposals are expected to address at least five of the following aspects:

¹⁴⁰ [COM \(2023\) 668 final - EUR-Lex - 52023DC0668 - EN - EUR-Lex \(europa.eu\)](#)

¹⁴¹ See for instance the ETC/ICM Report 2/2022: Mapping potential environmental impacts of offshore renewable energy, at: <https://www.eionet.europa.eu/etcs/etc-icm/products/etc-icm-reports/etc-icm-report-2-2022-mapping-potential-environmental-impacts-of-offshore-renewable-energy>

¹⁴² <https://www.ospar.org/>

- Provide better knowledge and understanding of the cumulative environmental impacts of the offshore wind energy deployment according to the EU targets, when added to the current and planned human activities carried out in the same areas;
- Expand existing studies, field monitoring, and analysis from local to larger areas, and from site- or species-specific impacts to more general ones. Further develop and deploy field monitoring activities, measuring multiple pressures and impacts on marine and coastal ecosystems and their services, as well as pollution, from installation to decommissioning and possible repowering, including operational phase and maintenance activities;
- Test and demonstrate field monitoring and modelling technologies that allow to go beyond state-of-knowledge, regarding life-cycle environmental impacts of offshore wind energy deployments;
- Improve instruments and models for Maritime Spatial Planning, and environmental assessments at plan and project level that are in alignment with public authorities' needs;
- Improve modelling capacity and environmental impact assessments of future offshore wind deployment;
- Support the identification of areas where wind energy deployment is particularly suitable without significant environmental impact and areas where on the contrary, it should be avoided;
- Identify strategies, test, and demonstrate technologies that avoid, minimise, mitigate and compensate the environmental impact of bottom-fixed and floating offshore wind energy systems, propose mitigation and restoration measures and if feasible, provide net-positive environmental impacts. The activities carried out under this point are expected to achieve TRL 5 by the end of the project.

Particular attention must be dedicated to ensuring that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable) and to leveraging existing community practices for data sharing especially those in the relevant European common data spaces and in the European Research infrastructures.

Complementarities with other ongoing and upcoming Horizon Europe projects are expected to be ensured as well as with the [European Digital Twin of Ocean \(European DTO\)](#) and its [core infrastructure](#), for instance the projects funded under topics:

- HORIZON-CL6-2025-02-CLIMATE-02: The ocean-climate-biodiversity-people nexus: uncovering safe operating space for safeguarding the integrity and health of the global ocean;
- HORIZON-MISS-2025-03-OCEAN-08: EU Digital Twin Ocean: Contribution to the EU DTO core infrastructure through applications for sustainable ocean management;

- HORIZON-MISS-2023-OCEAN-01-06: Innovative nature-inclusive concepts to reconcile offshore renewables with ocean protection;
- HORIZON-MISS-2023-OCEAN-01-08: Integration of socio-ecological models into the Digital Twin Ocean;
- HORIZON-CL5-2024-D3-02-08 Minimisation of environmental, and optimisation of socio-economic impacts in the deployment, operation and decommissioning of offshore wind farms.

In addition to considering the most evident environmental impacts of offshore wind energy systems (displacement, collision risk, exposure to aerial and underwater noise, habitat loss and degradation, pollution, etc.), funded projects must include an analysis of possible new impacts, that may become particularly relevant when a high number of wind energy systems is deployed, for instance in relation to the decommissioning and removal of end-of-life offshore wind energy systems, the presence of dynamic cables suspended in the water column, the impact of submarine geohazards on the dynamic cables or the production of microplastics.

Environmental monitoring data must be open source and be shared with the European Marine Observation and Data Network (EMODnet) and the International Energy Agency Wind Energy Systems Technology Collaboration Programme's (IEA Wind TCP) Task on the environmental effects of wind energy.

HORIZON-CL5-2025-02-D3-09: Optimised/Alternative Silicon Growth Technologies (from either liquid or gaseous phase) for PV Applications (EUPI-PV Partnership)

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions

	under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁴³ .
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Expected Outcome: The majority of commercially available photovoltaic (PV) solar cells produced worldwide are made of crystalline silicon. Material quality, process technologies, and solar cell architectures have improved significantly in recent decades, and solar cell efficiencies are now approaching 27%, thus close to the theoretical limit. However, challenges remain in several aspects, such as increasing the production yield, stability, reliability, cost, and sustainability.

The ingot and wafering production steps are power intensive and produce recyclable waste in the form of kerf slurry – the residue ingot material from between the sliced wafers. These production steps are highly concentrated in China.

Project results are expected to contribute to all of the following expected outcomes:

- A European economic base which is stronger, more resilient, competitive, and fit for the green and digital transitions, by reducing environmental impact and strategic dependencies for critical raw materials and components;
- Scaling-up solar PV manufacturing capacity in Europe for an accelerated solar PV deployment, supporting Europe's decarbonisation targets;
- Reduced energy and material consumption and lower carbon and environmental footprint for crystalline silicon PV products along their lifecycle;
- The execution of the solar energy joint research and innovation agenda¹⁴⁴.

Scope: Due to their efficiency and durability, crystalline silicon wafers are by far the most common absorber material used in the production of solar cells and modules today. These wafers are primarily made using either a directional solidification that produces large-grained multi-crystalline (mc-Si) wafers with a greater defect density (and therefore almost out of production) or a solar-optimised Czochralski (Cz) growing method that produces crystalline silicon with low defect density (c-Si). In addition, “kerfless” silicon wafers can be grown directly either from molten silicon or from gaseous epitaxial deposition on a low-cost substrate at high temperature. To facilitate continued and rapid proliferation of Si photovoltaics, realizing new, more efficient and less energy and material intensive processes for silicon feedstock, ingots and wafers is sought. Therefore, proposals are expected to address at least one of the following challenges:

¹⁴³ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁴⁴ [Commission Staff Working Document "Solar energy joint research and innovation agenda with Member States in the context of the European Research Area \(ERA\)"](#)

- Demonstrate alternative, efficient, and scalable (towards gigawatt capacity) processes or methods and equipment to grow silicon ingots and wafers from either liquid or gaseous phase at lower cost (with lower energy and material requirements) and high-quality compared to standard processes and possibly avoid the wafering step;
- Optimise standard processes and equipment for defect, impurities and structure loss minimisation, high-quality ingots with large diameters (for larger wafers) that allow for higher level of automation and kerf recycling and/or use of recycled silicon from waste solar modules and reduced energy use; optimise wafering.

Proposals are expected to involve multidisciplinary consortia including at least one silicon ingot and wafer manufacturer.

Whenever the expected exploitation of project results entails developing, creating, manufacturing and marketing a product or process, or in creating and providing a service, the plan for the exploitation and dissemination of results must include a strategy for such exploitation. The exploitation plan should include preliminary plans for scalability, commercialisation, and deployment (feasibility study, business plan) indicating the possible funding sources to be potentially used (in particular the Innovation Fund).

This topic implements the co-programmed European Partnership for Innovation in Photovoltaics (EUPI-PV). As such, projects resulting from this topic will be expected to report on the results to the European Partnership for Innovation in Photovoltaics (EUPI-PV) in support of the monitoring of its KPIs.

HORIZON-CL5-2026-02-D3-10: Towards commercialisation of Perovskite PV and development of dedicated manufacturing equipment (EUPI-PV Partnership)

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 24.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: The rapid development of perovskite solar cells (PSCs) over the past decade makes it the most promising next generation photovoltaic technology, owing to its prominent advantages such as tuneable bandgap, high absorption coefficients, uncomplicated

preparation process and considerable power conversion efficiency which has reached a certified 26.7% at cell level. Tremendous efforts in material and device engineering have also increased moisture, heat, and light-related stability. All these features render perovskite solar modules suitable for terawatt-scale energy production with a low levelised cost of electricity (LCOE). A number of companies are working on PSCs and some of them, have been establishing new pilot production lines and/or expanding production capacity. Still, the greatest challenges toward commercialisation are scaling up (including ambient manufacturing), achieving long-term stability, reducing, or eliminating the use of toxic solvents, and preventing Pb leakage into the environment.

Project results are expected to contribute to all of the following expected outcomes:

- Increase the potential for commercialisation of perovskite PV creating competitive technological know-how for the European PV industrial base;
- Support a European economic base which is stronger, more resilient, competitive, and fit for the green and digital transitions, by reducing strategic dependencies for critical raw materials and components;
- Support the execution of the solar energy joint research and innovation agenda¹⁴⁵.

Scope: Metal halide perovskite solar cells have attracted much attention because of their low-cost fabrication and high efficiency. In addition, tandem devices, especially perovskite-Si tandems, are expected to play an important role in perovskite commercialisation. Poor stability of these devices remains however the key challenge in their path toward commercialisation. To overcome this issue, a robust encapsulation technique by employing suitable materials and structures with high barrier performance against the external environment must be developed to protect perovskite devices. Dedicated manufacturing processes and equipment need also be demonstrated. Therefore, proposals are expected to address all of the following aspects:

- Demonstrate effective strategies to enhance the optoelectronic properties, performance and stability, and minimise the environmental impact of perovskite devices;
- Scale-up reliable deposition of high-quality perovskite films over large areas, (overcoming the degradation of efficiency as device/module areas scale up) but also patterning and interconnections to connect individual cells into modules;
- Demonstrate internal and external encapsulation structures as protection from extrinsic environmental stressors, such as moisture, oxygen, heat, and illumination;
- Develop module designs considering recyclability requirements and restrictions as to the control and management of toxic Pb²⁺ that could be produced by the irreversible deterioration of the perovskite materials;

¹⁴⁵ [Commission Staff Working Document "Solar energy joint research and innovation agenda with Member States in the context of the European Research Area \(ERA\)"](#)

- Assess performance and reliability according to international standards and compared with well-established PV technologies; develop and apply test protocols for performance and reliability tailored to the features of perovskite and/or perovskite-Si tandem technology.
- Demonstrate suitable equipment adapted to the specific requirements of perovskite (or perovskite-Si tandem) production process.

Proposals are expected to involve multidisciplinary consortia including at least one perovskite or equipment manufacturer.

Whenever the expected exploitation of project results entails developing, creating, manufacturing and marketing a product or process, or in creating and providing a service, the plan for the exploitation and dissemination of results must include a strategy for such exploitation. The exploitation plan should include preliminary plans for scalability, commercialisation, and deployment (feasibility study, business plan) indicating the possible funding sources to be potentially used (in particular the Innovation Fund).

This topic implements the co-programmed European Partnership for Innovation in Photovoltaics (EUPI-PV). As such, projects resulting from this topic will be expected to report on the results to the European Partnership for Innovation in Photovoltaics (EUPI-PV) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-02-D3-11: Novel inverter technologies and flexibility in PV systems (EUPI-PV Partnership)

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and</i>	The rules are described in General Annex G. The following exceptions

<i>financial set-up of the Grant Agreements</i>	apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁴⁶ .
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Expected Outcome: Integrating renewable and distributed energy resources, such as photovoltaics (PV) and energy storage devices, into the electric distribution system requires advanced power electronics, or smart inverters, that can provide grid services such as voltage and frequency regulation, ride-through capabilities, dynamic current injection, and anti-islanding functionality. To enable this integration, designing novel smart inverter technologies, developing robust control algorithms for better inverter functionality, determining interactions between multiple smart inverters and between inverters and utility distribution systems, supporting standards development for smart inverter functionalities, and analysing the impacts of smart inverters on distribution systems is necessary.

Project results are expected to contribute to all of the following expected outcomes:

- Energy yield improvement of PV systems based on smart digitalisation;
- Optimal utilisation of generated energy, energy savings, and enhanced overall energy efficiency;
- Enhanced flexibility services and interoperability;
- The execution of the solar energy joint research and innovation agenda¹⁴⁷.

Scope: Proposals are expected to:

- Demonstrate new inverter technologies with increased power density and reliability at lower cost (e.g., allowing for medium voltage PV systems), that integrate new power device technologies based on wide bandgap semiconductors (e.g., GaN, SiC) that could supply synthetic inertia and a range of grid services;
- Design of smart (e.g., integrating condition and health monitoring), and with improved capabilities, inverter hardware and firmware;

¹⁴⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁴⁷ [Commission Staff Working Document "Solar energy joint research and innovation agenda with Member States in the context of the European Research Area \(ERA\)"](#)

- Ensure inverters' electromagnetic compatibility (EMC) proposing optimal mitigation techniques for the causes and propagation pathways of electromagnetic interference (EMI), and conformity with current and under development standards;
- Use of control and power hardware-in-the-loop techniques to determine interactions between multiple inverters at multiple points of common coupling;
- Demonstrate integrated communication connection between inverters and other components (e.g., battery, PV modules, grid, etc.) to automatically gather their information (serial number, geolocalisation, etc.) and support the creation of Digital Twins and PV data models, towards a real predictive monitoring of electricity production;
- Evaluate system integration and cybersecurity, while providing guidance for future developments (e.g., recyclability) in both hardware and software.

This topic implements the co-programmed European Partnership for Innovation in Photovoltaics (EUPI-PV). As such, projects resulting from this topic will be expected to report on the results to the European Partnership for Innovation in Photovoltaics (EUPI-PV) in support of the monitoring of its KPIs.

HORIZON-CL5-2026-02-D3-12: Extending the lifetime of crystalline silicon PV modules (EUPI-PV Partnership)

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy</p>

Community (2021-2025). ¹⁴⁸ .

Expected Outcome: Photovoltaic (PV) energy systems are one of the cheapest and fastest growing sources of electricity generation, largely thanks to an important decrease in the cost of solar modules in the last 10-15 years, and to their simple installation. The PV market is changing fast, recently transitioning to high-efficiency crystalline silicon cell concepts (e.g., Tunnel Oxide Passivated Contact (TOPCon), Heterojunction (HJT), Interdigitated Back Contact (IBC), tandem, etc.), larger modules or novel designs (e.g., bifacial), use of new materials (e.g., anti-reflection and anti-soiling coatings, thinner glass, new encapsulants and backsheets), or increased number and topology of busbars or wires. There is no PV lifetime definition, but manufacturers usually guarantee a 25-year lifetime with an expected degradation rate of 0.8% per year. However, abnormal degradation rates are still reported for cell and module technologies due to a variety of failures which reduce reliability and increase the cost of PV systems operation.

Project results are expected to contribute to all of the following expected outcomes:

- Reduced degradation to levels that enable longer PV module lifetimes;
- Increased module durability and reliability;
- Resource efficiency and lifelong energy yield improvement of PV systems;
- Decreased levelised cost of electricity (LCOE);
- Execution of the solar energy joint research and innovation agenda¹⁴⁹.

Scope: The degradation rate might vary depending on many factors such as material properties, environmental stress (solar irradiance, humidity, temperature, wind speed, dust, etc.), installation, design and type of components and connections, with some components deteriorating on their own and others impacting additional PV components, leading to more severe failures. To tackle these issues and extend the lifetime of PV modules (and systems) proposals are expected to:

- Identify defects and failure modes encountered in recently developed high-efficiency or novel design c-silicon modules themselves and their components, exploring their mechanisms and root causes, reviewing each component's susceptibility to defects and failures and impacting additional PV components;

¹⁴⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁴⁹ [Commission Staff Working Document "Solar energy joint research and innovation agenda with Member States in the context of the European Research Area \(ERA\)"](#)

- Develop, where necessary, simple, cost-effective and accurate module defect detection techniques (including through Artificial Intelligence (AI)), applicable to most PV modules and systems;
- Propose mitigation approaches at module and system level and validate approaches through modelling and/or AI modelling and lab testing;
- Perform outdoor field experiments and testing to determine degradation rates and/or to identify defects and failure modes and estimate service lifetime.

Different locations representing the European range of climates are to be considered for field experiments.

This topic implements the co-programmed European Partnership for Innovation in Photovoltaics (EUPI-PV). As such, projects resulting from this topic will be expected to report on the results to the European Partnership for Innovation in Photovoltaics (EUPI-PV) in support of the monitoring of its KPIs.

HORIZON-CL5-2026-02-D3-13: De-risking wave energy technology development through transnational pre-commercial procurement of wave energy research and development

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 20.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Pre-commercial Procurement
<i>Exceptional funding rates</i>	In line with the nature of the instrument and the need to leverage national funding, the funding rate for grants awarded under this topic and type of action is 50% of the eligible costs.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Energy producers and consumers benefit from improved efficiency and flexibility, reduced cost, improved reliability, robustness and security compared to existing wave energy technologies;

- Wave energy technology providers profit from accelerated technology development, successful demonstrations and de-risking of wave energy technologies with a view to their commercial exploitation;
- Wave energy technology providers have improved access to financing through better understanding of technological solutions and their bankability, leading to effective market uptake, business models, and commercialisation avenues;
- Researchers, industry, public authorities, and citizens have access to increased knowledge, monitoring and assessment methods and tools on the environmental, biodiversity, and socio-economic (both positive and negative) impacts of the wave energy technologies along their lifecycle and value chains;
- Wave energy technology providers have detailed analysis of current costs and potential future energy cost reduction pathways and the creation of a detailed business plan for full scale commercialisation resulting in a clear path for commercial roll-out of the successful wave energy design(s) beyond the lifetime of the project;
- Funding authorities pool resources at national and EU levels dedicated to Research and Development and provide effectively a significant developmental boost of wave energy technology.

Scope: The challenge is the development and demonstration of cost-effective wave energy converters that can survive in a harsh and unpredictable ocean or sea environment through demand-driven pre-commercial procurement (PCP). The challenge is open to proposals seeking to steer wave energy development in an effective way at a European level and to bring these technologies to the market.

The operation of wave energy prototypes in real sea conditions is a critical step to establish confidence in the devices and to facilitate the large-scale roll-out of this renewable technology. Pre-commercial procurement has been shown to be an effective tool to de-risk such activities.

The EuropeWave PCP action has introduced the ocean energy stage-gate process on a European-level procedure following the evaluation framework provided by Task 12 of the IEA Ocean Energy System Technology Collaboration Platform. It supported the development of several wave energy devices in a stage-gate process to Stage 3 (approximately TRL 6). The scope of this action is to bring wave energy technologies at Stage 4 (approximately TRL7/8). Designs must achieve completion of Stage 4 activities of the IEA-OES Framework Evaluation Areas by the end of the action, including technical, socio-economic, and sustainability aspects.

Proposals have to describe their jointly identified challenge, indicating how it fits into their mid-to-long term innovation plans, and specify why solutions currently available on the market or under development are not meeting their needs.

Activities have to include: (1) networking related to preparation, management and coordination and (2) joint research activities related to the validation of PCP strategy. The consortium should include at least three legal entities established in different member states or Horizon Europe associated countries, as well as a minimum of two 'public procurers'. Other entities with a clear added value in the preparation and/or execution of the PCP or in coordination and networking activities might be considered.

The proposed action is to be structured as following:

Preparation phase:

Participating users/buyers of R&D services (with either a pan-European, national, or regional focus) should agree on a common set of performance levels and associated specifications for wave energy systems. The funding from the participating users/buyers and the European Union will be used to bring forward wave energy technologies and complete Stage 4 (reach TRL7/8).

The procurement is open to any entities established in the EU or countries associated to Horizon Europe, and the proposed wave energy technology must be able to evidence the satisfactory completion of stage 3 activities as a minimum prior-development requirement (with or without the support of EuropeWave). A phased approach can be considered to allow developers to qualify for selection for the Stage 4 demonstration. Demonstrators don't have to be necessarily tested at the same site.

At the end of the preparation phase, the following results are expected: i) completed tender documents, ii) signed joint procurement agreement confirming the collaboration modus operandi including the financial commitment of the buyers' group and iii) final confirmation of the lead procurer.

Execution phase:

This phase will take care of implementing the PCP and its contracts.

The procurement will be executed as a single joint procedure in which different lots can be considered. The research and specification works are expected to lead to at least two commercial scale demonstrators tested for at least 12 months in a commercially representative site during the action duration following the IEA-OES¹⁵⁰ stage-gate metrics.

Results will be shared with the European industry to accelerate the technology development and the establishment of guidelines and standards to facilitate the transferability of knowledge creation. At the end of the action, at least one of the demonstrators is expected to be ready for testing in an operational environment at commercial scale.

At the end of the action, designs are expected to be ready to proceed to Stage 5 activities of the IEA-OES Framework Evaluation Areas (Commercial-scale array demonstration).

¹⁵⁰ IEA-OES: International Energy Agency – Ocean Energy Systems

HORIZON-CL5-2026-02-D3-14: Development of innovative solutions strengthening the security of renewable energy value chains

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>Proposals are expected to clearly address only one of the areas within the scope (area 1, 2 or 3).</p> <p>To ensure a balanced portfolio covering areas 1., 2. and 3., grants will be awarded to applications not only in order of ranking but at least also to one project that is the highest ranked within area 1., 2. or 3., provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁵¹.</p>

Expected Outcome: The security of Europe's clean energy system will, in the long-run, benefit from research and innovation addressing energy-security relevant criticalities of the underlying clean energy technology value chains.

Project results are expected to contribute to some of the following expected outcomes, from which all actors of European clean energy value chains can benefit:

¹⁵¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Strengthened European knowledge base, skills, research and industrial leadership on solutions for energy-security related aspects of renewable energy value chains;
- Technical and value chain solutions are developed addressing key aspects improving the energy security of renewable energy technologies;
- Strengthened availability of skilled labour (crafts, science and business) in order to increase the intra-European share of entire value chains;
- Improved competitiveness, sustainability including social awareness, and resilience of European renewable energy value chains.

Scope: Proposals are expected to provide in-depth assessments that will lead to novel solutions improving critical aspects of specific renewable energy technologies and their respective value chains impacting EU's energy security.

Proposals are expected to focus on the development of solutions for these critical aspects, which could highly improve the overall capacity of the specific value chain in contributing to an improved energy security for Europe in the long run. The projects must address precisely only one of the following areas:

Area 1- Sustainability and social awareness of specific renewable energy value chains as a limiting factor for their roll-out and performance over time (this is expected to be addressed either for hydropower or bioenergy);

Area 2- Skills for renewable energy value chains as a limiting factor for innovation and deployment of relevant clean energy technologies;

Area 3- Complexity for specific renewable energy value chains (this is expected to be addressed either for grid based RFNBOs and/or direct solar fuels and can for example include issues such as necessary market interactions for substrates, or interfaces between different reactions).

Applicants must explicitly indicate to which of these three areas they apply.

Proposals are expected to build on the results of the *Study on clean energy R&I opportunities to ensure European energy security by targeting challenges of distinct energy value chains for 2030 and beyond*¹⁵².

¹⁵² European Commission, Directorate-General for Research and Innovation, Schleker, T., Hicks, M., Cressida Howard, I. et al., *Study on clean energy R&I opportunities to ensure European energy security by targeting challenges of distinct energy value chains for 2030 and beyond final report*, Schleker, T.(editor), Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2777/906828>

HORIZON-CL5-2025-02-D3-15: Building a Long-Term Africa Union (AU) and European Union (EU) Research and Innovation joint collaboration on Sustainable Renewable Energies

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If eligible for funding, legal entities established in the African Union member states¹⁵³ may exceptionally participate in this Coordination and Support Action as beneficiary or affiliated entity.</p> <p>In addition to the standard eligibility criteria, at least 40% of the beneficiaries must be established in African Union member states.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁵⁴</p>

Expected Outcome: The EU intends to play an increasingly leading role in global and multilateral initiatives. The EU is developing further the AU-EU Research and Innovation Partnership on Climate Change and Sustainable Energy, emanating from the AU-EU High-level Policy Dialogue ('Africa initiative'), to implement the AU-EU Innovation Agenda¹⁵⁵

¹⁵³ "African Union member states" includes countries whose membership has been temporarily suspended

¹⁵⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁵⁵ One of the flagship initiatives of the Global Gateway, which will in particular support the implementation of short-, mid- and long-term actions in the area of green transition related to climate change.

adopted in July 2023. The Green Deal underlines that “Renewable energy and energy efficiency, for example for clean cooking, are key to closing the energy access gap in Africa while delivering the required reduction in CO₂”.

Project results are expected to contribute to all of the following expected outcomes:

- R&I communities of researchers, industries, funding organisations and policy makers will count on a lasting AU-EU sustainable R&I partnership framework to implement joint R&I programmes of activities;
- Researchers, industry, public authorities, and citizens have access to increased knowledge, assessment methods, tools and expertise network;
- The joint AU-EU Climate Change and Sustainable Energy Collaborative Partnership and EU Science Diplomacy in Africa will be strengthened.

Scope: The proposal will build on the achievements made under the project LEAP-RE to strengthen and establish a sustainable collaboration framework. The proposal will expand and provide support to the established community of researchers, industries, innovators and funding organisations involved in the partnership, and seek to create links to other relevant R&I communities. Activities will contribute to human and institutional capacity-building and turn the AU-EU Research and Innovation Partnership on Climate Change and Sustainable Energy into a long-term platform for collaboration.

The activities to be covered are:

- Support the implementation of the AU-EU Innovation Agenda priority on Green Transition and the Global Gateway in Sub-Saharan Africa to increase investments in energy access;
- Analyse the impact of relevant EU-Africa research and innovation projects funded by the EU in the sustainable energy domain;
- Accelerate the translation of innovation into real-life outputs;
- Engagement of local communities across the African continent, in view of facilitating co-design, hybridisation and accelerated adoption of innovation; social sciences and humanities – including gender studies – is expected to play a key role;
- Develop human and institutional capacities on innovative sustainable energy through the creation of a sustainable network of experts and of science-based policymaking knowledge in synergy with existing activities of other AU and EU initiatives;
- Implement and push further clustering activities with all relevant on-going EU, national and regional funded projects, to enable stronger cross-projects co-operation, consultations and joint activities on cross-cutting issues;

- Provide support to the AU-EU Climate Change and Sustainable Energy Partnership of the AU-EU High Level Policy Dialogue on Science, Technology and Innovation, and other AU-EU policy agendas;
- Update strategic and joint research and innovation action roadmaps, implemented and defined in the project LEAP-RE (www.leap-re.eu) to the new ambitions for 2030 and 2050.

Proposals are to provide a long-term perspective and vision on how the AU-EU Research and Innovation joint collaboration on Sustainable Renewable Energies will be supported both financially and structurally, after the end of the project. Proposals should include activities to further develop this long-term perspective and vision, and how to implement it. Synergy and complementarity with projects selected under topics *HORIZON-CL5-2024-D3-01-09: Africa-EU CO-FUND action* and *HORIZON-CL5-2025-06-D1-07: Implementing the climate action pillar of the EU-African Union Partnership on Climate Change and Sustainable Energy* will need to be ensured.

Energy systems, grids & storage

Proposals are invited against the following topic(s):

HORIZON-CL5-2025-02-D3-16: Support to the BRIDGE initiative

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁵⁶ .

¹⁵⁶ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link:

Expected Outcome: The development of research and innovation policies, as well as general energy policies in the area of smart and integrated energy systems require a sound evidence base. The BRIDGE¹⁵⁷ initiative established by the European Commission brings together projects funded under the Horizon 2020 and Horizon Europe programmes in the areas of Smart Grids, Energy Storage, Islands, and Digitalisation. BRIDGE has a twofold objective. On the one hand, it fosters the exchange of information, experience, knowledge, and best practices among the projects. On the other hand, it provides field experience, feedback and lessons learned from the participating projects to help overcome the barriers to effective innovation. It aims at gathering coordinated, balanced and coherent recommendations presented with a single voice to policy makers, in view of successfully supporting research and innovation actions, and exploiting the results achieved by projects.

Project results are expected to contribute to all the following expected outcomes:

- European research and innovation policies, and energy policies in the areas of smart energy systems are supported by evidence gathered from the implementation of real-life projects.
- Projects funded under Horizon Europe that address energy systems are informed on solutions and methodologies that were previously developed by European-funded projects and are effectively benchmarking their results and compare lessons learnt with other similar European projects.
- Consolidation of the BRIDGE initiative and re-affirmation of its role as a recognised European reference for providing innovative solutions for the development of smart and integrated energy systems.
- Effective and improved cooperation of BRIDGE with other European initiatives that are active in related areas (such as ETIP SNET¹⁵⁸).

Scope: Proposals are expected to:

- Provide professional support to the overall organisation of the BRIDGE initiative, its working groups and task forces. This includes organisational and logistical support for the governance of BRIDGE, e.g. for the preparation and execution of meetings and support to the activities of coordination with other EU and/or national initiatives and bodies. It also includes support to the chairs of the working group chairs in fulfilling their roles and facilitating the periodic processes for the renewal of the chairmanship.
- Onboard new projects and maintain the database of BRIDGE members in terms of projects, implementing organisations/project partners, their membership in Working Groups and Task Forces, contact details.

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁵⁷ <https://bridge-smart-grid-storage-systems-digital-projects.ec.europa.eu/>

¹⁵⁸ <https://smart-networks-energy-transition.ec.europa.eu/>

- Ensure the completion and publication of the relevant reports, studies, brochures, policy briefings etc. Three main categories of documents are envisaged:
 1. BRIDGE annual brochures¹⁵⁹ – are prepared by the project, updated annually and published online;
 2. Annual thematic/expert reports¹⁶⁰ containing policy conclusions and recommendations – are drafted by the BRIDGE working groups under the coordination of their chairmanship, as decided in their annual work programmes. The project ensures final editorial support and formatting, and their publication online;
 3. Other reports, as needed and decided by the Bridge chairmanship on a case-by-case basis.
- Maintain the online presence of BRIDGE and ensure the related communication activities, notably through maintaining and developing its dedicated web page, distributing a periodic (online) newsletter, and posts on social media.
- Enable BRIDGE to provide policy support to the European Commission services (mainly to DG Energy) by gathering, structuring and presenting information on technological progress, innovation, competitiveness and digitalisation in the field of smart energy systems.
- Organise the annual BRIDGE General Assemblies, including invitations, hosting, minutes/conclusion drafting and follow up on action points. The meetings usually take place in March, usually face-to-face in Brussels with hybrid options available.
- Manage cooperation with other relevant European initiatives, notably with the European Technology and Innovation Platform - Smart Networks for Energy Transition (ETIP SNET). Manage the representation of BRIDGE and its member projects at key events (e.g., European Sustainable Energy Week, established European fairs such as Enlit – to be decided on a case-by-case basis etc.).

Proposals submitted under this topic are encouraged to include actions designed to facilitate cooperation, across Europe, with other initiatives and to ensure the accessibility and reusability of data produced during the project.

The indicative project duration is three years.

¹⁵⁹ As an example, see the Bridge Brochure 2023 <https://bridge-smart-grid-storage-systems-digital-projects.ec.europa.eu/sites/default/files/download/bridge%20cooperation%20between%20horizon%202020and%20horizon-MJ0423748ENN.pdf>

¹⁶⁰ See examples at <https://bridge-smart-grid-storage-systems-digital-projects.ec.europa.eu/news/10-new-reports-produced-bridge-working-groups-and-task-forces-now-available-download>

HORIZON-CL5-2025-02-D3-17: Control and operation tools for a RES-based energy system

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

- Improved preparedness of the electricity system to support the EU's binding target for 2030 of minimum 42.5% renewables in gross final energy consumption, with the aspiration to reach 45%;
- Grid operators employ improved tools for forecasting energy generation from renewable sources and energy demand;
- Grid operators employ innovative energy management systems and technologies for smart grids to operate efficiently the integration of RES at various voltage levels;
- Transmission and distribution system operators develop better capacity for exploiting system flexibility and accessing services for demand response and energy storage;
- System operators develop structured mechanisms to cooperate with energy suppliers and service providers when required by grid conditions;
- Transmission and distribution system operators cooperate and develop mechanisms to reduce system risks associated with increased fluctuating generation.

Scope: Projects are expected to:

- Design and test innovative technologies, processes, and control mechanisms for the seamless integration of massive volumes of renewable energy sources (RES) at distribution and transmission levels. The solutions are expected to incorporate both hardware and software aspects;
- Address network constraints and increase flexibility capabilities of grids, through advanced operation and control mechanisms and tools, for improving the overall grid performance and the efficiency of RES uptake;
- Ensure effective coordination between transmission and distribution levels of the electricity grids, for the integration of massive volumes of RES at multiple voltage levels, maintaining grid stability and overall preparing for a RES-based energy system.

The demonstration, test and validation of the activities should be carried out in at least two pilots in different EU Member States and Associated Countries.

Proposals should demonstrate a clear understanding of the challenges and opportunities associated with integrating renewable energy sources into the existing energy system. Building on this, they should demonstrate a comprehensive approach for developing and testing advanced technologies and control mechanisms that can effectively address these challenges, while capitalising on solutions for digitalising the energy system.

In addition, projects should propose a set of best practices and recommendations on the effective uptake of increased shares of renewables. This should be suitable for a level of renewables in the electricity system that would allow reaching the EU's binding renewable target for 2030 of minimum of 42.5% (with the aspiration to reach 45%).

Projects are expected to include at least two electricity transmission system operators (TSOs) and four distribution system operators (DSOs), which could be distributed among the pilots of a particular project.

Additionally, collaboration is encouraged with the following entities:

- at least three suppliers of energy from renewable sources, out of which at least two should supply energy from non-dispatchable energy sources. The supply covered by the project should include both wind and solar energy sources;
- at least two providers of energy services for the grids (e.g., aggregation of energy supply and/or energy demand, energy storage).

This collaboration (minimum number of entities) is sought per project in total and does not necessarily apply per each pilot in particular.

Selected projects are expected to contribute to the BRIDGE initiative¹⁶¹ and actively participate in its activities.

¹⁶¹ <https://bridge-smart-grid-storage-systems-digital-projects.ec.europa.eu/>

HORIZON-CL5-2026-02-D3-18: Next generation distribution substation for increasing the system resilience

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Improved observability, monitoring and control of the electricity distribution grids;
- Optimised management (including maintenance) of the grids by system operators and improved system resilience (including withstanding natural hazards and cybersecurity incidents);
- Grid operators integrate in their practices real-time decision-making. These could be assisted by artificial intelligence (AI) algorithms, if applicable;
- A 'smart substation ecosystem' is created that includes distribution system operators, technology/solution providers, integrators, application developers etc. This should cover both high-to-medium and medium-to-low voltage levels.

Scope: Projects are expected to:

- Demonstrate the integration of power electronics, intelligent electronic devices (IEDs), and software solutions in the distribution substations or in their proximity;
- Demonstrate real-time monitoring and analysis of grid conditions (including power quality, voltage levels, grid component monitoring, and overall system performance) that

allow operators to quickly identify and address any potential issues or disturbances, help to prevent outages and minimise the impact of service disruptions;

- Consolidate data streams from otherwise dispersed sources to create unified visualisations and consolidated analytics that offer insights into the performance of distributions substations;
- Develop the concept of a flexible and programmable electricity distribution grid in which the substation is a centre of intelligence that facilitates optimal power routing while ensuring the resilience of the electricity grid.

The demonstration, test and validation of the activities should be carried out in at least two pilots in different EU Member States and/or Associated Countries.

The projects should propose a set of best practices and recommendations on effective overarching principles and operational measures for: (i) building smart distribution substations, and (ii) integrating them into a more resilient, intelligent, and responsive distribution grid which is able to tackle disturbances and address net congestion.

Projects are expected to include at least five distribution system operators (DSOs) operating across different geographies and climate conditions. This total number of DSOs per project could be distributed across the different pilots of a particular project.

Additionally, collaboration is encouraged with the following entities:

- at least two suppliers of technologies for smart power substations;
- at least one TSO.

This collaboration (minimum number of entities) is sought per project in total and does not necessarily apply per each pilot in particular.

The selected projects are expected to contribute to the BRIDGE initiative¹⁶², actively participate in its activities.

HORIZON-CL5-2026-02-D3-19: Innovative solutions for a generative AI-powered digital spine of the EU energy system

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

¹⁶²

<https://bridge-smart-grid-storage-systems-digital-projects.ec.europa.eu/>

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Availability of generative Artificial Intelligence (AI) tools for electricity system operators, energy service providers, and households and energy communities to enhance digital and green transformation in energy, mobility, and buildings;
- Implementation of decentralised IT solutions based on generative AI to support local grid optimisation, thereby increasing the uptake of renewable energy sources, electric vehicles, and electrification of household and industrial demand at the distribution level;
- Increased reliability, resilience, security, and energy efficiency of the energy system through advanced AI and digital tools;
- Enhanced knowledge for modernising and operating energy networks, integrating digital services, renewables, and electrification through the use of cutting-edge AI technologies;
- Development of smarter demand-side tools for industries and consumers, leveraging AI to optimise energy production and consumption.

Scope: To achieve the Green Deal objectives for 2030 and 2050, substantial investments are required in a smart and digitally enabled energy system capable of integrating higher shares of renewable energy and electrification of demand and electricity storage. This encompasses various sectors such as transport (notably electric vehicles), industry (heating and hydrogen production) and residential heating.

Effective smart planning, operation and control of the electricity grid and numerous distributed devices – including smart electricity meters, smart bi-directional charging networks for electric vehicles, and smart building platforms – are essential. These efforts must be underpinned by markets for flexibility and demand response, along with seamless data exchange between actors and devices.

On-going innovation in the energy data space, smart Internet of Things (IoT) solutions, and digital twins for energy systems, coupled with energy price and market considerations, provide the foundation for advanced energy system intelligence. This intelligence will be

further enhanced by leveraging generative artificial intelligence and the emerging AI Factories¹⁶³.

The scope is to develop and pilot prototypes of a generative AI-powered digital spine¹⁶⁴ that enhances the digitalisation and decarbonisation of the EU energy system.

The overall scope is the development of a prototype of an automated, AI-powered, software-defined smart energy system leveraging and further developing existing (open-source) digital solutions of lower TRLs developed in EU and national research, innovation- and deployment-programmes, as well as AI algorithms and tools provided by the AI Factories, namely to:

- Develop and test the potential for generative AI to develop apps/programmes for local system optimisation and for system planning and operation;
- Develop and test generative AI that can identify sources of flexibility and provide solutions for interoperability and data exchange to enable decentralised optimisation of distributed assets. This includes the integration with various data sources and sectors, such as mobility, to promote decentralisation, energy-efficiency, and cost-efficiency and to enable interoperability across different parts of the energy system;
- Explore the potential of generative AI for system optimisation through scenario generation, simulation, and time series forecasting, while also developing optimisation tools for both supply-side and demand-side management using forecasts and data for renewable energy, transmission assets, storage, and energy-saving applications for consumers;
- Propose tools and control systems to apply generative AI solutions developed in a high-risk use-case (as defined in the AI act).

The developed solutions should be dynamic, flexible, offering reconfigurable automated management, control and data exchange to ensure seamless operations across decentralised a setting.

Projects are expected to:

- Demonstrate AI-powered energy services, tools for power system planning and operation, and smart grid functionalities, such as flexibility, and electric vehicle (EV) charging as well as possibly transmission system operation across at least three EU member states and/or associated countries to enhance demand flexibility and drive innovative capabilities for decarbonisation and energy efficiency;
- Indicate which generative AI basic tools, including available tools from the AI Factories, will be used and demonstrate how energy sector users will be involved in the

¹⁶³ <https://digital-strategy.ec.europa.eu/en/policies/ai-factories>

¹⁶⁴ <https://digital-strategy.ec.europa.eu/en/news/accelerating-green-transition-role-digital-infrastructures-decarbonising-energy-and-mobility>

development and the testing (and possible uptake) of the generative AI tools by the project;

- Indicate what types of assets and what data sources will be used and involved in the project;
- Involve both traditional energy stakeholders and new entrants, such as energy service companies, aggregators, digital infrastructure providers, system integrators, energy asset manufacturers, energy communities, and active consumers;
- Leverage relevant European and international standards and technical specifications, and actively engage with standards development organisations;
- Contribute to the BRIDGE initiative¹⁶⁵, actively participate in its activities;
- Make use of the AI Factories and solutions, open-source where relevant, building on developments in previous Horizon Europe projects, particularly those related to flexibility markets and data exchange, Internet of Things and edge-cloud computing, adhering to relevant standards and engaging with standards development organisations to further develop these standards;
- Demonstrate how the new solutions can be integrated into and/or replace (parts of) existing legacy systems, including (for projects that focus on DSOs) demonstrate how the new solutions can integrate core functions of grid operations including SCADA systems functionality;
- Jointly provide a diverse set of applications of generative AI.

HORIZON-CL5-2026-02-D3-20: Innovative tools and services to manage and empower energy communities

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply:

¹⁶⁵

<https://bridge-smart-grid-storage-systems-digital-projects.ec.europa.eu/>

	The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Integration of home and building assets in an efficient way based on common Internet of Things (IoT) communication standards for smart homes and using SGAM architecture and data models (e.g., IEC CIM) for load, generation and storage devices;
- Facilitate local energy trading and distributed grid-oriented services using micro market and transactions (e.g., peer-to-peer) and improve the market participation for citizens;
- Enhance the integration of energy communities in European energy grids and increase the renewable energy share and use of flexibility by providing transparent and efficient market-based cost sharing mechanisms;
- Increase the security of data exchange, for prosumer and customer resources, and independent (commercial) asset operators;
- Increase synergies using a cross-sectoral approach (e.g., electricity, gas, mobility, heating/cooling) at the level of citizens and/or energy communities;
- Empower local governments and intermediaries, strengthen overall community energy policies in EU Member States and enhance tool accessibility and user capacity at local level to promote a decentralised and co-owned energy transition.

Scope: The project should:

- Develop innovative and open-source tools for managing shared energy community assets (e.g., energy storage facilities) and optimising energy community management (e.g., selection and switching of aggregators, preparation and trading of smart contracts, peer-to-peer and energy sharing, self-consumption);
- Develop open-source tools for forecasting, prediction and advanced data analysis using AI tools and in-depth data analysis for customers and prosumers for autonomous optimisation of consumption, production, storage, smart devices (appliances), and electric vehicle (EV) both at household and energy community levels;
- Extend DSO SCADA and substation systems for autonomous control of grid assets and seamlessly integrate these systems with home and building energy management systems for direct and fast control and data acquisition to implement local (distribution) grid services (constrain alleviation, grid reconfiguration, restoration of supply, maintenance,

and enhancement of energy quality), real-time assessment and monetisation of the use of grid resources;

- Integrate the three elements above as a basis to establish a platform for cooperation between individual customers or prosumers, entire energy communities, wide area aggregators, and DSOs to provide, acquire, and settle energy system-oriented services (system-wide balancing, support of frequency regulation). The cooperation platform should be based on a plug-and-play integration of the energy community eco-system components (hardware and software), using and extending relevant communication standards and data models. The integration mechanism should be embedded within the core systems used by customers/prosumers, DSO (and TSO), aggregators and market operators, fully aligned with SGAM;
- Develop tailored security solutions for private and public communication networks used by IoT apps and devices (smart appliances) across energy carriers;
- Ensure the follow-up and implementation of EU policy measures, including by conducting quality assessments and introducing national community energy targets;
- Foster institutional allies at local and regional levels;
- Provide access to and capacities for using digital planning tools;
- Identify the barriers for network operators (e.g. legal, economic, regulatory etc.) who want to introduce smart consumption options for their customers.

Preferably semantically interoperable interactions, as enabled by the ETSI SAREF ontologies, are used. Furthermore, the project should follow the IEC TR 63097 Smart Grid Roadmap, and where relevant, the developed solutions should be open for off-shelf integration using common communication and data standards.

The project should benefit from the direct participation of energy communities, smart appliances manufacturers, home energy devices manufacturers, home and building energy management system developers, Distribution System Operators (DSOs), and aggregators.

However, in order to comply with Article 33, 36 and 54 of Directive (EU) 2019/944, TSOs or DSOs participating in this project should not own, develop, manage or operate energy storage facilities or recharging points for electric vehicles. Moreover, the role of the distribution system operator in facilitating peer to peer trading should be without prejudice to the rules in Article 35 Directive (EU) 2019/944.

The developed solutions have to be tested within, at least, three energy communities from different European countries, preferably in regions with different socio-economic development contexts and different resource availabilities. Technical and social characteristics should be used in the project to validate the developed solutions' credibility. The demonstration sites should cover complex and technologically advanced energy communities, each located within the range of neighbouring secondary substations supplying

a variety of customers/prosumers with close-to-autarky local energy generation, a range of energy vectors, a significant share of storage facilities, and flexible topology already available or to be achieved as an integral part of the project. The secondary substation should be already equipped with advanced monitoring and control systems.

In order to increase the replication potential of the deployed solutions the three energy communities are invited to closely collaborate with similar energy communities.

The selected projects are expected to contribute to the BRIDGE initiative and actively participate in its activities. Additional contributions to the ‘Alliance for Internet of Things Innovation’ (AIOTI) and other relevant activities (e.g., clusters of digital projects and coordinating actions) might be considered when relevant.

In particular, this topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

HORIZON-CL5-2025-02-D3-21: Cross-regional network and market model for optimisation of long duration storage

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 14.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for

	Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁶⁶ .
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Energy system planners and operators will deliver advanced tools to better optimise overall system value of Long-Duration Energy Storage (LDES) for cross-regional networks and markets dominated by intermittent and stochastic renewable energy sources.
- Optimised LDES integration in relevant grid locations will help energy system stakeholders to maximise total lifetime cost-benefit, improved grid-operation as well as avoided fossil fuel use and CO₂ abatement, renewable energy balancing and reduced need for network reinforcement;
- Finetuned business cases for revenue stacking for multiple services as well as detailed overview of marginal abatement costs of various technologies and their combinations across the participating regions will help operators, planners and investors to take the right long term strategic decisions concerning LDES integration in the energy system.
- Cost effective decarbonisation and market revenue streams to improve LDES economics (e.g., nodal and locational pricing) will increase investors trust and therefore accelerate LDES roll out.

Scope: The project will develop and test new, advanced, integrated models and tools for cross-regional networks and markets that are dominated by intermittent and stochastic renewable energy sources. This spatial-temporal model should be designed to create, analyse and optimize scenarios for strategically integrating, locating and dimensioning LDES (here defined as: >12h) for a future European energy system.

The proposed solution will be tested under different scenarios in a relevant/operational environment. The project should be based on a complete understanding of existing operational systems in at least two adjacent regions (NUTS 2 or 3) – best represented in the form of a digital twin (or similar). Consortia should include the respective system operators, service providers, technology providers, potential financial actors and other relevant stakeholders.

The project should produce practical, operationally useful knowledge on cross-regional strategies for combining a variety of clean flexibility LDES solutions/technologies and cross-sector integration, focusing on the optimal combination of LDES with RES production sites, industrial complexes and districts (e.g. co-location and hybridisation), to support the grid.

¹⁶⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

This topic will analyse the overall system value of integration of LDES (>12h) in the energy system under different future decarbonisation pathways, assessing the impact on operation and planning of energy infrastructure costs as well as security of supply, system reliability and resiliency.

The scope is to maximise the benefit of LDES integration within the context of system wide optimisation of long-term grid enhancement strategies. This encompasses relevant, validated historical data sets, visualisation, scenario analysis, model sensitivity analysis and data set optimisation, optimal use of previously developed models and digital twins, cyber security, use of open-source solutions and free licensing.

The project is expected to identify technical and regulatory barriers, and propose possible recommendations and policy actions, to promote the best solutions tackling these barriers and support replication of the solutions.

HORIZON-CL5-2026-02-D3-22: Underground Thermal Energy Storage in dense urban areas

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁶⁷.</p>

¹⁶⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Advanced European innovative knowledge basis and increased technology competitiveness in the area thermal storage;
- Improved security of the future European renewable-based energy system;
- Contribution to the decarbonisation of cities and densely populated urban areas with high safety solutions;
- Significant reduction of LCOHS (Levelised Cost of Heat Storage);
- Local communities are engaged and their expectations are responded to.
- Technology developers practice inclusive societal engagement which is early, continuous, and sensitive to the technical specificities (e.g. local resource, subsurface uncertainties) and social challenges (e.g. low public awareness) of underground thermal energy storage technologies in the context of densely populated urban areas.

Scope: In scope are novel technologies, interfaces, design methods and organisational concepts that result in the most effective and sustainable use of subsurface space in dense urban areas by Underground Thermal Energy Storage (UTES) systems such as ATES, CTES and BTES.

Proposals should consider the integration in the existing energy grids and interaction with other urban uses of the subsurface (e.g., subways, underground utilities, buildings), including energy geostructures of buildings, tunnels, slabs, energy sheet pile walls, etc., with potential geothermal heating, cooling, and sinks or storage opportunities.

Proposals should address the uncertainties in the seasonal energy demand to increase the predictability of the required subsurface space, the interactions among systems for the sake of optimal use of subsurface and thermal efficiency.

Projects are expected to deploy one or more demonstrators and can address, for example, one or more of the following exemplary areas:

- Optimal utilisation of geothermal resources and thermal energy storage in urban settings, addressing high (above 70 degrees Celsius), medium (30-70 degrees Celsius) and/or low temperatures (10-30 degrees Celsius) and possible requirements for retrofitting of the building stock;
- Subsurface models for a sustainable underground thermal storage and geothermal use in cities;
- The integration of heat pumps, advanced thermal storage, and interface with district heating infrastructures to contribute to the thermal and power grid flexibility;

- Studying the impact of subsurface urban heat islands (SUHI) on the potential of shallow geothermal energy use in cities, using, for instance, long-term subsurface monitoring networks, satellite monitoring and models;
- Best practices strategies for subsurface land-use plans in European cities; well/borehole placement strategies;
- Mutual interaction of existing and future neighbouring UTES systems from geotechnical, energy, and regulatory point of view;
- Management of energy grids on an urban scale and system optimisation thorough digital twins predicting operational, environmental and economic response, as well as the interaction between the storage system and the local grids, under different scenarios;
- Creation of large (time and scale-wise) open multisensory datasets to foster heat energy storage at the European scale which should adhere to the FAIR data principles, adopt data quality standards, data integration operating procedures and GDPR-compliant data sharing/access good practices developed by the European research infrastructures, where relevant.
- Use of advanced monitoring systems such as fibre optic sensors, satellite imagery, etc. for monitoring and early detection of adverse impact of UTES at a district scale level and providing measures to mitigate such effects.

Consideration should be given to de-risking solutions, and dedicated support schemes that guide innovative energy storage technologies through to the commercialisation stage. The consortium should assess the current regulatory context and provide recommendations linked to the proposed solutions for shaping future needs (e.g., regulatory, standardisation, permitting). In addition, appropriate local community engagement initiatives as well as expectations and experiences of underground thermal storage infrastructures (and to what extent it varies in dense urban areas) should be explored.

This topic requires citizens engagement and dialogue and the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities and ensure the translation of innovation into real-life outputs.

HORIZON-CL5-2025-01-Two-Stage-D3-23: Critical elements for energy security of grid and storage technologies

Call: Cluster 5 Call 01-2025 (2-stage) (WP 2025)	
Specific conditions	
<i>Expected EU contribution per</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately.

<i>project</i>	Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 9.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>Proposals are expected to clearly address only one of the areas within the scope (area 1, 2 or 3).</p> <p>To ensure a balanced portfolio covering all above areas, grants will be awarded to applications not only in order of ranking but at least also to one project that is the highest ranked within each area, provided that the applications attain all thresholds (and subject to available budget).</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹⁶⁸.</p>

Expected Outcome: Project results are expected to contribute to some of the following expected outcomes:

- Development of advanced solutions contributing to strengthen the energy security of energy network and/or storage technologies for renewable energy;

¹⁶⁸

This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Contribution to strengthened European technology knowledge base on energy system security;
- Solutions addressing key aspects improving the technological and cross-cutting value chain aspects for energy security of grid and/or storage technologies are developed;
- Contribution to improved security of the future European renewables- based energy system as an important factor in its cost-effectiveness and therefore directly impacting European competitiveness;
- Contribution to the creation of European technological leadership in the energy security field and creation of a knowledge base for European industrial competitiveness.

Scope: Development of novel solutions, which address specifically critical aspects affecting the energy security of energy network and/or storage technologies in respect of uninterrupted and cost-effective access to energy. As energy security of the energy grid and safe storage of variable renewables is directly related to a cost-effective and sustainable European energy system and therefore essential to European competitiveness, not only energy security aspects of the grid and storage technologies as such, but also those related to their respective value chains need to be addressed. Proposals should focus on development of solutions for grid and/or storage technologies, which can highly improve their sustainability, resilience, and overall energy security performance in the European context in the long run. Proposals should take into consideration the results of the Study on clean energy R&I opportunities to ensure European energy security by targeting challenges of distinct energy value chains for 2030 and beyond¹⁶⁹.

Project should address precisely only one of the following areas:

Area 1- Advanced tools to address cybersecurity risks to 1) energy system transmission and distribution and 2) renewables to storage and storage to energy network interface technologies;

Area 2- Increasing circular economy processes, recycling, re-use or substitution of sustainably supplied critical materials and electronics for energy network and storage technologies;

Area 3- Sustainability and public perception of energy network and storage technologies as a limiting factor for their required capacity build-up and efficient performance in a secure energy system (e.g., hydropower, CAES storage).

Furthermore, a framework for decent working conditions, most notably essential skills, and efficient skills management within the overall energy network and storage system are essential for inclusivity and competitiveness of these systems. They should be addressed as an important transversal value chain component.

¹⁶⁹ European Commission, Directorate-General for Research and Innovation, Schleker, T., Hicks, M., Cressida Howard, I. et al., *Study on clean energy R&I opportunities to ensure European energy security by targeting challenges of distinct energy value chains for 2030 and beyond final report*, Schleker, T.(editor), Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2777/906828>

Carbon Capture, Utilisation and Storage (CCUS)

Proposals are invited against the following topic(s):

HORIZON-CL5-2026-02-D3-24: New CO₂ capture technologies

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>In order to ensure a balanced portfolio of activities covering both (i) point-source capture and (ii) direct air capture technologies, grants will be awarded not only in order of ranking but at least also to one proposal that is the highest ranked within each area, provided they attain all thresholds (and subject to available budget).</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁷⁰.</p>

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

¹⁷⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- New capture technologies (either from point sources or directly from air) should lead to reduced overall cost of capture, as well as lowest possible negative environmental impact, including water use.

Scope: Development of new or emerging capture technologies with high potential for cost reduction. Proposals shall address capture of CO₂ either from one of the following areas (and explicitly identify which is being covered):

1. Point sources, or
2. Directly from air (direct air capture, DAC).

Depending on the capture routes chosen (e.g., solvents, sorbents, membranes, cryogenic, solid looping), examples of important issues to address include enhanced absorption/adsorption, improved kinetics and reduced energy use for CO₂ capture and desorption, new materials with high selectivity for CO₂ capture, flexibility of operation, modularisation and scale-up, space occupation, degradation and life span of capture materials, ability for retrofit, potential for heat integration, and solvent-induced corrosion.

In particular for DAC, examples of important issues to address are novel sorbent or solvent materials that have higher CO₂ capture capacities and longer-term stability in the presence of heat and air. For all proposals, minimisation of health and environmental impact must be addressed in the project also in view of future scaling up. The developed technologies should aim at delivering CO₂ at the specifications required for transport and storage, with very low levels of impurities.

For point-source capture, the technologies should address the performance profile and characteristic when operating under variable operating conditions such as load changes to maintain and as high as possible capture rate across the entire operating profile. Results from point-source capture should provide good matches between specific industrial application and capture technology while guaranteeing the quality and continuity of the industrial process.

The use of the European Research Infrastructure for CO₂ Capture, Utilisation, Transport and Storage ECCSEL is encouraged but not mandatory.

In particular for DAC, international cooperation with participating countries of the Mission Innovation Carbon Dioxide Removal Mission¹⁷¹ is encouraged.

HORIZON-CL5-2025-02-D3-25: Effects of CO₂-stream impurities on CO₂ transport and storage

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU</i>	The Commission estimates that an EU contribution of around EUR 5.00

¹⁷¹ Carbon Dioxide Removal – Mission Innovation (mission-innovation.net)

<i>contribution per project</i>	million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>In order to ensure a balanced portfolio of activities covering either (i) transport infrastructure or (ii) storage infrastructure, grants will be awarded not only in order of ranking but at least also to one proposal that is the highest ranked within each area, provided they attain all thresholds (and subject to available budget).</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁷².</p>

Expected Outcome: The design and safe operation of a CO₂ transport and storage system represents specific challenges as it involves CO₂ streams at different flow rates, pressures and states (liquid, gaseous, super critical, dissolved in water), and with different compositions and impurities. The presence of impurities will change the chemical and thermophysical properties with respect to a pure CO₂ fluid. When CO₂ is transported in pipelines at conditions close to its critical temperature and pressure, the impact of impurities on the thermophysical properties can become substantial. High levels of CO₂ stream purity must be achieved to avoid two-phase flow during pipeline transportation. In addition, reactive impurities can form strong acids giving unacceptable corrosion of pipelines, tubings and ships, and can impact on injectivity, well integrity and seal integrity of geological storage sites. Directive 2009/31/EC regulates that CO₂ streams, while they may contain incidental associated substances from the source, capture or injection process, the concentrations of these substances should be below levels that would adversely affect the integrity of the storage site or the relevant transport infrastructure and not pose a significant risk to the environment or human health. Member States should ensure that storage site operators only accept and inject CO₂ streams if a risk assessment shows that these conditions are met.

¹⁷² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

The Communication on Industrial Carbon Management¹⁷³ underlines the need for pre-normative research on the physical and chemical behaviour of impure CO₂ in order to contribute to relevant guidelines and standardisation work. This was also emphasised in a report prepared by a stakeholder group on CO₂ standards under the CCUS Forum¹⁷⁴.

Project results are expected to contribute to all of the following expected outcomes:

- Contribution to an accurate understanding of the effects of impure (and possibly corrosive) CO₂ flows along the transport network (in particular pipelines and shipping) or in the storage complex in line with Art. 12 of Directive 2009/31/EC, including any engineered or geological barriers to leakage in the near-well region;
- Inform relevant guidelines and contribute to standardisation work through improved understanding of the physical and chemical behaviour of impure CO₂.

Scope: Based on the application chosen (either transport or storage), projects have to deliver:

- Recommendations for design and operation of pipelines and/or ship offloading, including recommendations for public health and safety requirements and for protective and/or mitigating material and/or approaches and/or monitoring technology to avoid adverse effects on the integrity of the relevant transport infrastructure caused by impurities;
- Recommendations for public health and safety requirements and for protective and/or mitigating material and/or approaches and/or monitoring technology to avoid adverse effects on the integrity of the storage complex;
- Guidance and recommendations for technology providers, regulatory authorities, certification and standardisation bodies, and define and implement ambitious dissemination actions to promote the project results and support their uptake.

Projects can address, for example, the following issues:

- Transient flow modelling along the pipeline network and;
- Combined thermodynamic and corrosion modelling to predict corrosion rates under different conditions;
- Reactive transport and geochemical modelling of the storage reservoir in the near-well zone, including associated geological barriers to leakage;
- Generation of experimental data on the geochemical reactions of reservoir rocks, caprocks, well cements and fault seals exposed to impure CO₂ under the span of pressure and temperature regimes relevant for planned and future storage projects in

¹⁷³ [EUR-Lex - 52024DC0062 - EN - EUR-Lex \(europa.eu\)](#)

¹⁷⁴ <https://circabc.europa.eu/ui/group/75b4ad48-262d-455d-997a-7d5b1f4cf69c/library/13c2a475-c705-432d-8ca3-17ce799ba502/details>

saline aquifers, depleted hydrocarbon reservoirs and or mafic and ultra mafic formations for mineral storage of CO₂, to tune existing and/or new models;

- Generation of experimental data on thermophysical and corrosive properties of CO₂-rich mixtures under CCS-relevant conditions, to tune existing or new models;
- Impact of impurities on various equipment (e.g., valves, gaskets, compressors, instrumentation), in particular on non-metallic components in the CO₂ transportation system;
- Impact of impurities on the physical behaviour and geochemical interaction of the CO₂ stream within the storage complex;
- Impact of achieving very low impurity levels on the relative costs of competing capture technologies and the trade-off with costs for CO₂ transportation and geological storage;
- Development of a systematic method to understand limits for impurities and define specifications for transport and storage infrastructure.

The use of the European Research Infrastructure for CO₂ Capture, Utilisation, Transport and Storage ECCSEL is encouraged but not mandatory.

Selected projects are encouraged to seek synergy with possible standardisation activities performed by CEN, CENELEC, ISO and ETSI on pre-normative research for standards for the transport and permanent storage of carbon dioxide¹⁷⁵.

International cooperation is encouraged, in particular with projects or partners from the United States.

HORIZON-CL5-2025-02-D3-26: European investment atlas of potential CO₂ storage sites

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial</i>	The rules are described in General Annex G. The following exceptions

¹⁷⁵ Open call for proposal, 6 June 2024. See: [Support to Standardisation activities performed by CEN, CENELEC and ETSI - European Commission \(europa.eu\)](#)

<i>set-up of the Grant Agreements</i>	apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁷⁶ .
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Expected Outcome: The emergence of a Carbon Capture and Storage (CCS) value chain in the European Union and Associated Countries is currently being hampered by a lack of a clear pathway to mature CO₂ storage sites. In the Net Zero Industry Act regulation (NZIA), the EU has defined the objective that at least 50 million tonnes of CO₂ per year can be stored geologically by 2030, in storage sites located in the territory of the European Union, its exclusive economic zones or on its continental shelf within the meaning of the United Nations Convention on the Law of the Sea (UNCLOS) and which are not combined with enhanced hydrocarbon recovery. There is a need to understand if current storage development is enough to meet EU storage requirements defined in the NZIA.

Project results are expected to contribute to the following expected outcome:

- Enhanced availability of CO₂ storage sites and transparency about potential CO₂ storage and injection capacity and infrastructure, including in relation to geomechanical characteristics and pressure interference from neighbouring storage projects, which can support market operators to plan their investments and enable the implementation of large-scale storage hubs connected to shared CO₂ transport infrastructure.

Scope: The project is expected to produce a digital atlas of ‘investable’ underground storage space for CO₂ in the EU and Associated Countries. The European CO₂ Storage Atlas¹⁷⁷ currently under revision and being updated by the GSEU project¹⁷⁸, including estimated capacity and storage readiness level, presents a good basis, but also shows that data gaps need to be closed, and access to the necessary data during project implementation will be crucial. The Commission's Energy and Industry Geography Lab¹⁷⁹ can also be used. Proposals are expected to include the following:

- Identify and assess with a harmonised methodology, injection and storage capacities for current and planned projects and compare with storage requirements;
- Identify key regions for future pre-licence appraisal (high estimated capacity, proximity to emitters, transport corridors), and develop plans for pre-licence appraisal, per region;

¹⁷⁶ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁷⁷ [European CO₂ storage database - European Commission \(europa.eu\)](#)

¹⁷⁸ [GSEU \(geologicalservice.eu\)](#)

¹⁷⁹ [Energy and Industry Geography Lab - European Commission \(europa.eu\)](#)

- Each potential storage site must be labelled according to its ‘storage readiness level’ in line with the storage readiness levels included in the GSEU atlas, and matched with public data to speed up the work to identify and assess the storage capacities and what is needed to mature understanding of the site. Furthermore, the identified potential storage sites should be compared and ranked by applying a common ranking scheme developed based on currently used ranking schemes and including a techno-economic assessment;
- Environmental and security aspects must be taken into account.

The proposal is expected to explicitly demonstrate the capacity to have access to the necessary data during the implementation of the grant. Cooperation with relevant national and/or regional actors in the management of the subsurface, such as geological surveys or competent authorities, will be key.

HORIZON-CL5-2025-02-D3-27: Using captured CO₂ as a resource to replace fossil hydrocarbons in industrial production

Call: Cluster 5 Call 02-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 14.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Unlocking the economic potential of CO₂ utilisation. Strengthening the industrial carbon management value chain through the delivery of innovative solutions for recycling CO₂ to produce advanced synthetic fuels, chemicals, polymers or minerals, making them price-competitive and accelerating their market deployment.
- Contributing to emission reduction, energy security and autonomy of the EU through the gradual substitution of fossil-based feedstocks in the production of chemicals and materials by alternative feedstocks, like waste and residues, and captured CO₂.

Scope: Proposals must aim at reducing the capital intensity and energy and environmental footprint of CO₂ conversion technologies to allow for upscaling in the short to medium term.

In particular, proposals are expected to:

- Provide information and assessment about the economic feasibility and the potential of scaling-up the proposed solutions at commercial scale as appropriate.
- Reduce the use of virgin critical raw materials.
- Define ambitious but achievable targets for energy requirements of the conversion process, production costs and product yields, as well of price competitiveness, that will be used to monitor project implementation.
- Define minimum CO₂ concentrations and maximum impurities levels that the conversion process can tolerate. Solutions that can cope with less pure CO₂ streams will improve the overall energy efficiency.
- Apply rigorous life-cycle analysis (LCA) to ensure that the proposed solution is comprehensively assessed on its ability to contribute to long-term sustainability: climate mitigation, adaptation, biodiversity, water use, pollution, and virgin resources depletion. The LCA must be in line with guidelines developed by the Commission, such as the Innovation Fund GHG methodology and the relevant ISO standards and the EU Taxonomy Regulation.

Proposed solutions should focus on the CO₂ conversion process, although integration in industrial capture or direct air capture facilities can be included.

Enhanced oil, gas or coalbed methane recovery (EOR/EGR/ECBM) are out of scope of this topic.

Whenever the expected exploitation of project results entails developing, creating, manufacturing and marketing a product or process, or in creating and providing a service, the plan for the exploitation and dissemination of results must include a strategy for such exploitation and an analysis of equivalent final products in the market. The exploitation plans must include preliminary ideas for scalability, commercialisation, and deployment (feasibility study, business plan, financial model) indicating the possible funding sources to be potentially used (in particular the Innovation Fund).

Efficient, sustainable and inclusive energy use

This Destination targets the energy demand side, notably a more efficient use of energy in buildings and industry. It contributes to the activities of the Strategic Energy Technology Plan (SET Plan) and its implementation working groups.

This Destination contributes directly to the Strategic Plan's **Key Strategic Orientations** 'Green transition', 'Digital transition' and 'A more resilient, competitive, inclusive and democratic Europe'.

In line with the Strategic Plan, the overall **expected impact** of this Destination is to contribute to the 'Using energy in buildings and industry in an efficient, affordable and sustainable way'.

The main impacts to be generated by topics under this Destination are:

Highly energy-efficient and climate neutral European building stock

1. The life-cycle energy performance and resource efficiency of the European building stock is improved at an accelerated pace and contributes to the EU's energy security.
2. The renovation and construction are cost-efficient, affordable and less disruptive, have reduced climate and environmental impact through circularity, and use of low-carbon materials.
3. The buildings in Europe are increasingly interacting with the users, energy system and their environment contributing to an integrated, resilient, secure and flexible operation.
4. The buildings and built environment in Europe mitigate climate change and are more resilient.
5. The built environment is inclusive and delivers a better quality of life for all users.

Industry

The energy efficiency of EU energy intensive industries is improved, their consumption of fossil fuel and their GHG and other pollutants emissions are drastically reduced, while preserving / enhancing their global competitiveness.

Highly energy-efficient and climate neutral European building stock

Proposals are invited against the following topic(s):

HORIZON-CL5-2026-02-D4-01: On-site innovative robotic and automated solutions and techniques for more sustainable and less disruptive building renovation and construction

Call: Cluster 5 Call 02-2026 (WP 2025)

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁸⁰ .

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Measurable reduction in overall time spent on site for renovation and construction, compared to current best practices;
- Measurable increase in resource efficiency, as well as improved accuracy (designed vs. as-built), of on-site renovation and construction works, compared to current best practices;
- Measurable reduction in noise pollution, air pollution (e.g., particulate matter) and other pollution caused by on-site renovation and construction works, compared to current best practices.

¹⁸⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope: Buildings need to be sustainable and resource efficient, and the rate of deep renovation needs to be increased. This can be accelerated by modernising the construction sector and embracing the latest developments in robotics and automated systems. There is need for further research on innovative on-site robotic and other automated solutions and techniques that make renovation and construction works more sustainable, less disruptive, faster, as well as more accurate, cost effective and resource efficient.

Proposals are expected to address all of the following:

- Test and validate the use of innovative on-site robotic and automated solutions and techniques both for construction of buildings and for renovation of which at least one must investigate 3D printing;
- Apply a research methodology which allows for a robust comparison of at least the three expected outcomes of the proposed innovative solutions and techniques with current best practices;
- Investigate aspects of on-site workers' safety and human-robot collaboration related to the future application of the proposed solutions and techniques;
- Test and validate at least three prototype solutions and techniques to investigate their applicability for a variety of building typologies, duly justified to represent a relevant part of the European building stock. The prototypes should be validated in a lab or another relevant environment. Testing and validation must address solutions for both renovation and construction. The prototypes should be applicable either to renovation, or to construction, or to both, but both renovation and construction need to be addressed in a proposal.

Selected proposals could consider the involvement of the European Commission's Joint Research Centre (JRC) whose contribution could consist of providing added value regarding various aspects of on-site robotics for construction and renovation, as well as performing experimental research for validating full-scale prototype buildings renovated and/or constructed with robotic solutions.

HORIZON-CL5-2026-02-D4-02: Smarter buildings as part of the energy system for increased efficiency and flexibility – Societal Readiness Pilot

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.

<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁸¹.</p>
<i>Exceptional page limits to proposals/applications</i>	The page limit of the application is extended by two pages to 52 to properly address Societal Readiness-related issues.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Measurable reduction in buildings' energy demand together with a reduced gap between their as-designed and as-built energy performance;
- Measurable increase in the number of building typologies with smart grid connected renewable energy sources (RES) and energy storage together with increased flexibility in grid/network management and operations;
- Measurable enhancement of the smart readiness of buildings as rated by the Smart Readiness Indicator and/or other relevant building rating systems;
- Improved responsiveness by the relevant stakeholders to the needs and concerns of users from a diversity of social groups, including vulnerable and disadvantaged ones, involved in or potentially affected by the smart buildings, thereby increasing the potential for beneficial societal uptake and building trust in outcomes.

¹⁸¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope: The construction sector and the building subsector remain among the least digitised. Smart buildings can contribute to reducing energy demand, curbing operational CO₂ emissions, integrating RES and enhancing grid flexibility through optimised energy usage. At the same time, it is essential that smart buildings are flexible and adaptive to changing needs and usage patterns and are user-friendly to encourage widespread adoption of these technologies by grid operators, construction professionals, building facility managers and users. Furthermore, to ensure the societal benefits of the smart building technologies there is a need for increased user knowledge, acceptance and satisfaction.

Proposals are expected to address all of the following:

- Develop solutions that enhance the smartness of buildings by using and facilitating the upgrade of existing Building (Energy) Management Systems (BMS/BEMS) and/or other technical equipment;
- Ensure that the proposed solutions are user-friendly and provide the expected indoor environmental quality, as well as user satisfaction and occupant comfort;
- Demonstrate the proposed solutions in at least three pilots. These pilots should collectively cover at least three different climatic zones, three different building types (residential, tertiary etc.), and three different technical building systems;
- Develop a methodology to measure the achieved energy demand reduction, increased flexibility in the grid, and enhanced interoperability, compared to current best practices;
- Investigate the cost-effectiveness and replicability of the proposed solutions.

This topic is a Societal-Readiness pilot:

- Proposals should follow the instructions applying to the Societal readiness pilot, as described in the introduction of the Horizon Europe Main Work Programme 2025 for Climate, Energy and Mobility. They entail the use of an interdisciplinary approach to deepening consideration and responsiveness of research and innovation activities to societal needs and concerns.
- This topic requires effective contribution of the relevant SSH expertise, including the involvement of SSH experts in the consortium, to meaningfully support Societal Readiness. Specifically, SSH expertise is expected to facilitate the socio-technological interface and enable the design of project objectives with Societal Readiness related activities.

HORIZON-CL5-2026-02-D4-03: Innovative pathways for low carbon and climate resilient building stock and built environment (Built4People Partnership)

Call: Cluster 5 Call 02-2026 (WP 2025)
Specific conditions

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁸² .

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Improved planning methods and procedures which are replicable and scalable across Europe, and potentially globally, and that embed the uptake of building solutions to improve whole life carbon performance¹⁸³, circularity, sustainability, climate resilience, safety and durability of buildings and the built environment, in line with the commitment of making the EU climate neutral by 2050;
- Measurable increase in the number of relevant value chain actors applying such planning methods, procedures and building solutions for the benefit of citizens;

¹⁸² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁸³ “[Supporting the development of a roadmap for the reduction of whole life carbon of buildings](#)”, European Union, 2023’. This publication commissioned by the European Commission includes the following definition: “Whole life carbon encompasses all greenhouse gas emissions resulting from the materials, construction and the use of a building over its entire life, including its demolition and disposal. It is thus the total amount of embodied and operational emissions.”

- Quantified pathways to improved buildings' and built environment's whole life carbon performance.

Scope: EU and associated countries continue to develop innovative building solutions that support the decarbonisation and climate resilience of buildings and the built environment, addressing energy performance, circularity, sustainability, resource efficiency, climate resilience, safety, durability and adaptability of the building stock, and whole life carbon emissions. A key challenge remains the accelerated uptake of such solutions in building and renovation projects. Building value chain actors - such as housing association, municipal and regional authorities, or policy makers - require planning methods and procedures that embed the uptake of innovative building solutions and define pathways for the decarbonisation and climate resilience of the building stock and the built environment under their responsibility.

Proposals are expected to address all of the following:

- Develop and validate replicable and scalable planning methods and procedures that embed the uptake of innovative sets of building solutions when developing or regenerating (including deconstruction aspects when relevant) the building stock and the built environment;
- Validate the planning methods, procedures and sets of building solutions in a relevant environment in at least three countries, with different climatic conditions and building stock characteristics. In at least two cases, the proposed planning methods and procedures should be relevant for renovation;
- Investigate the use of innovative tools and methods which facilitate the adaptation of the buildings stock to changing user needs, while positively contributing to occupants' comfort and health;
- Propose and apply a methodology for assessing the effectiveness of the developed pathways for the decarbonisation and climate resilience of buildings and the built environment, including the calculation of their whole life carbon reduction compared to a "business as usual" scenario;
- Ensure the active involvement of all relevant public and private stakeholders of the whole renovation and construction value chain, which must include among others: municipalities, citizens (including vulnerable groups) and civil society organisations and the building and construction sector professions;
- Contribute to the objectives of the Built4People partnership and its network of innovation clusters¹⁸⁴.

Selected proposals could consider the involvement of the European Commission's Joint Research Centre (JRC) whose contribution could consist of providing added value on innovative building solutions for resource efficiency, safety, durability and adaptability of the

¹⁸⁴ https://built4people.eu/nebula_project/

building stock, as well as performing experimental research for validating those solutions on full-scale prototype buildings.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise (including social innovation), in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

This topic implements the co-programmed European Partnership on ‘People-centric sustainable built environment’ (Built4People). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘People-centric sustainable built environment’ (Built4People) in support of the monitoring of its KPIs.

HORIZON-CL5-2026-02-D4-04: Innovative approaches for the deployment of Positive Energy Districts

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁸⁵ .
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Increased number of approaches and solutions enabling a net positive yearly energy balance at district level and the export of excess renewable energy to the grid outside its geographical boundaries, with enhanced replicability on a larger scale in other positive energy districts (PEDs) in different contexts;
- Measurable increase in inclusiveness and public acceptance of the implementation of PEDs;
- Improved user-friendliness and user-awareness of guidelines, tools, and training materials targeting key professionals for overcoming the different types of barriers towards the realisation of PEDs.

Scope: Recent projects have demonstrated the feasibility of PEDs, but there is a need to further demonstrate climate-neutral impact, while developing and demonstrating innovative approaches and solutions for overcoming technical, business, social and organisational constraints in several domains. Such domains include, for example, climate mitigation, integration of renewable energy sources and energy storage in buildings, grid connections, accommodation of distributed energy generation and storage at district level, permitting, data privacy and security and the application of new technologies such as artificial intelligence. Presently, these constraints, which inhibit the demonstration of complete and qualified PEDs, require the cooperation of key professionals from the public and private sector, such as municipal and regional authorities and those from the energy and construction sectors, in complex implementation processes.

Proposals are expected to address all of the following:

- Demonstrate innovative approaches and solutions for overcoming constraints which prevent the successful implementation of PEDs;
- Develop supportive local planning frameworks for the design and realisation of PEDs;
- Demonstrate the proposed approaches, solutions, and supportive local planning frameworks in at least three districts in diverse geographical areas that implement energy efficiency measures alongside renewable energy installations, storage solutions, digital and smart technologies, and local energy communities;

¹⁸⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Develop and/or update existing guidelines, tools, and training materials for key professionals that will enable other cities to successfully replicate these innovative approaches, solutions and supportive local planning frameworks in their district/cities;
- Ensure the active involvement of all relevant public and private stakeholders, including citizens, through co-creation processes and community engagement activities.

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise (including social innovation), in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

HORIZON-CL5-2026-02-D4-05: Optimal combination of low embodied carbon construction products, technical building systems and circularity principles for climate neutral buildings (Built4People Partnership)

Call: Cluster 5 Call 02-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁸⁶ .
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Measurable reduction in whole life carbon emissions¹⁸⁷ and uptake of carbon removals in buildings;
- Increased integration of circular approaches for building construction and renovation works, with the aim of minimising lifecycle impacts;
- Availability of more accurate benchmarks and calculations of typical buildings' whole life carbon emissions and carbon removals, based on Level(s) and consistent with the life-cycle global warming potential provisions under the Energy Performance of Buildings Directive.

Scope: Buildings result in greenhouse gas emissions over their whole life cycle (operational and embodied emissions). Buildings can also contribute to long-term carbon removals by storing carbon in construction products. Construction and renovation works must also meet a variety of inter-related requirements such as structural and fire safety, acoustics, and a healthy and comfortable indoor environment. Although much research has focused on developing materials and products with reduced whole life carbon emissions, the life cycle impacts of buildings depend on a complex interaction between individual products, components and technical building systems, spatial distribution, usage during their lifetime, and other design choices. There is therefore a need to deliver buildings and renovation works with minimal life cycle impacts, in particular global warming potential, based on circularity principles, also accommodating future building use-change through design for flexibility, and using innovative combinations of products and systems that result in optimal building-level performance.

Proposals are expected to address all the following:

- Develop solutions that facilitate optimal combinations of construction products and systems with minimal life cycle environmental impacts at the level of the building. The optimal combinations of products and systems must also account for relevant aspects of performance such as structural integrity, thermal, acoustic and hygrometric, durability, potential for deconstruction and preparation for reuse at end of life, and potential for

¹⁸⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁸⁷ "[Supporting the development of a roadmap for the reduction of whole life carbon of buildings](#)", European Union, 2023'. This publication commissioned by the European Commission includes the following definition: "Whole life carbon encompasses all greenhouse gas emissions resulting from the materials, construction and the use of a building over its entire life, including its demolition and disposal. It is thus the total amount of embodied and operational emissions."

automated or industrialised installation. The solutions should cover, among others, the design and construction phases of work;

- Develop decision-related processes and strategies for adaptive reuse of existing structures, such as repurposing buildings as opposed to demolish and rebuild, considering the whole life carbon emissions;
- Validate the solutions, processes and strategies in a relevant environment in at least three countries, with different climatic conditions and building stock characteristics;
- Research the whole life carbon emissions of the developed solutions on typical building typologies in the chosen countries and contribute to whole life carbon benchmarking efforts;
- Consider the cost effectiveness of the developed solutions including relevant business models taking into consideration end-user needs;
- Contribute to the development of European standards¹⁸⁸, where relevant;
- Contribute to the objectives of the Built4People partnership and to the Built4People network of innovation clusters¹⁸⁹.

Selected proposals could consider the involvement of the European Commission's Joint Research Centre (JRC) whose contribution could consist of providing added value on circular design and building solutions that reduce life-cycle greenhouse gas emissions, and enable carbon removals, as well as performing experimental research for validating those solutions on full-scale prototype buildings.

This topic implements the co-programmed European Partnership on 'People-centric sustainable built environment' (Built4People). As such, projects resulting from this topic will be expected to report on results to the European Partnership 'People-centric sustainable built environment' (Built4People) in support of the monitoring of its KPIs.

Industry

Proposals are invited against the following topic(s):

HORIZON-CL5-2026-02-D4-06: Phase out fossil fuel in energy intensive industries through the efficient integration of renewable energy sources

Call: Cluster 5 Call 02-2026 (WP 2025)
Specific conditions

¹⁸⁸ 'harmonised standard' means a standard adopted by one of the European standardisation bodies listed in Annex I to Directive 98/34/EC, on the basis of a request issued by the Commission, in accordance with Article 6 of that Directive

¹⁸⁹ https://built4people.eu/nebula_project/

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Based on the results of the project, at least one industrial sector with a significant heating demand in the EU and Associated Countries develops pathways and business models to improve its energy efficiency, and to significantly reduce its consumption of fossil fuel and its emissions of GHG and other pollutants (including air pollutants), while preserving / enhancing its global competitiveness;
- With the goal of completely phasing out the use of fossil fuels in an industrial plant with a significant heating demand, the process(es) is(are) tightly integrated to minimise energy losses and its (their) energy supply relies on the local integration of a combination of renewable energy sources, including, where appropriate, process flexibility and storage to minimise its demand on the electricity grid.

Scope: Proposals are expected to demonstrate an innovative solution for the efficient, long lasting and cost-effective local integration of one or a combination of renewable thermal, electrical, bioenergy and other renewable energy sources in industrial processes, for heating, cooling and power generation, while optimising process efficiency and reuse, possibly upgrade of excess heat, with the aim of avoiding or drastically reducing fossil fuel use.

Process flexibility and energy storage can also be integrated, to match the energy demand of the industrial process with the variable renewable energy supply profile, and to minimise electricity demand from the power grid. Where possible, the integration with neighbouring industries and/or communities should be considered for the benefit of energy and resources sharing and efficiency.

The solution should be designed to ensure that the industrial process avoids or has very low GHG and other pollutant emissions, ensures high reliability and safety, and high physical and cyber security. It should be physically demonstrated in an industrial environment and be applicable to a significant share of the total energy demand of the industrial plant. The project should demonstrate through numerical simulations that the physically demonstrated solution can be scaled up to completely phase out the use of fossil fuels.

The project should facilitate the future deployment of the solution in the EU and Associated Countries' plants in the same industrial sector(s). Already before starting the design phase, the needs of most EU and Associated Countries' factories in the same industrial sector(s) should be surveyed and analysed in order to design a solution that can be adapted to meet most of them, to identify common components to be optimised/standardised and to issue/disseminate technical and economic guidelines.

Proposals are expected to present a strong business model and sound exploitation strategy for the proposed solution, as outlined in the introduction to this Destination.

DRAFT

Clean and competitive solutions for all transport modes

This Destination addresses activities that improve the climate and environmental footprint, as well as competitiveness, of different transport modes.

The areas of rail and air traffic management will be addressed through dedicated Institutional European Partnerships and are therefore not included in this document.

This Destination contributes directly to the Strategic Plan's **Key Strategic Orientations** 'Green transition', 'Digital transition' and 'A more resilient, competitive, inclusive and democratic Europe'.

In line with the Strategic Plan, the overall **expected impact** of this Destination is to contribute to the '*Achieving sustainable and competitive transport modes*'.

The main impacts to be generated by topics under this Destination are:

Zero-emission road transport

1. Clean solutions for zero tailpipe emission and environmentally friendly mobility for a climate neutral and zero pollution mobility with a higher level of circularity;
2. Affordable, user-friendly, inclusive, safe, and secure concepts and technologies that are easy to deploy, considering needs, behaviours, and socio-economic status of end-users;
3. Increased global competitiveness of the EU transport sector;
4. Increased responsiveness of zero tailpipe emission vehicles and systems to diverse societal interests and concerns;
5. Use cases and concepts for zero-emission road mobility of people and goods are successfully and innovatively demonstrated.

Aviation

1. New and updated Aviation Research and Technology Infrastructures, where the new research and technologies will be developed and tested;
2. Increased understanding and analysis of mitigation options of aviation's non-CO₂ climate impacts. New technologies for significantly lower local air-pollution and noise;
3. Accelerated uptake of sustainable aviation fuels in aviation, including the coordination with Member States and private initiatives.

Waterborne transport

1. The shipping industry (shipowners, equipment manufacturers, port authorities, terminal operators, and shipbuilders) will have access to high-power low and zero emission fuel solutions by 2030, leading to lower costs, enhanced energy efficiency, risk mitigation, standardised implementation, and improved operational efficiency through data science.

2. Port operators and ship owners will benefit from increased safety and technical standards on ammonia and hydrogen bunkering, including failure scenarios and risk mitigation;
3. The shipping industry will benefit from lower-cost and flexible battery-based solutions as primary sources of energy, higher safety standards and broader electrification solutions;
4. Shipowners, ship operators and port authorities will have access to OPS (Onshore Power Supply) solutions that will enable them to comply with the current and incoming legislative framework;
5. Policy makers and shipowners will benefit from access to accurate information and assessment methods on the direct energy savings resulting from the use of wind-assisted propulsion (WAP) systems under current legislative frameworks like FuelEU Maritime, contributing to the assessment of GHG intensity of energy used on-board. Shipowners, shipbuilders, and European shipyards will have access to commercially viable, cost-efficient, and easy-to-retrofit WAP solutions deployed at commercial scale, particularly for long-distance shipping;
6. Shipyards will have innovative holistic intelligent design tools for various retrofit solutions, enhancing the competitiveness of European shipyards and marine equipment providers;
7. Governments, port authorities, and shipping companies will benefit from access to standardised systems and tools for monitoring air pollutants and fuel consumption of ships, enabling compliance with current and incoming regulations on ship emissions;
8. Policymakers and enforcement bodies will benefit from innovative tools to fulfil the requirements of the Ship Sourced Pollution Directive resulting in an increased environmental protection of sea waters.

Transport related environment and health

The better monitoring of the environmental performance and enforcement of emissions regulation and biodiversity protection in order to reduce the overall environmental impact of transport (e.g., as regards biodiversity, noise, pollution and waste) on human health and ecosystems.

Zero-emission road transport

Proposals are invited against the following topic(s):

HORIZON-CL5-2025-04-D5-01: Efficient wireless stationary bidirectional charging solutions for road Light Duty Vehicles (2ZERO Partnership) – Societal Readiness Pilot

Call: Cluster 5 Call 04-2025 (WP 2025)

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Exceptional page limits to proposals/applications</i>	The page limit of the application is extended by two pages to 47 to properly address Societal Readiness-related issues.

Expected Outcome: Project results are expected to contribute to all the following outcomes:

- Bidirectional, interoperable low-power wireless (i.e., inductive) stationary charging solutions and services are demonstrated in operational environment for Light Duty Vehicle (vehicle category M1 and N1), with significantly reduced losses of power transfer reaching at least 90% power transfer efficiency in both directions and increased robustness against humidity and dirt, and in all weather conditions (including rain, snow and ice);
- Enhanced electro-magnetic compatibility (EMC) within health and safety limits conforming to international standards (e.g. SAE J2954, IEC 61980-1/-2/-3, CISPR 11 and ISO 19363) as well as avoiding interference with relevant telecommunication regulations and Low Frequency(LF)-based navigation systems (e.g., eLORAN);
- Enhanced social acceptance of automatic park and charge functionalities with increased comfort and complete cost/benefit assessment at system-level for acceptable costs;
- Demonstration of the solutions and their efficient integration into the electricity grid in on-street parking (and optionally in parking lots), incorporating advanced V2X technologies to ensure seamless interaction between the vehicles and energy systems to enhance the robustness and efficiency of the wireless charging solutions;

- Deeper understanding of the needs and concerns of diverse social groups involved in or potentially affected by the R&I development (e.g. employing synthetic population models and tools), thereby increasing the potential for beneficial societal uptake and building trust in results and outcomes.

Scope: Wireless stationary charging for road light duty vehicles can be a solution to minimise the intrusiveness of the charging infrastructures, which is critical in urban environments. Moreover, it can provide the EV user with a hands-free way of charging, which is of particular benefit for people with disabilities or other weaknesses. The holistic system approach of EV integration into electricity grids entails bi-directional power between EV and the grid to maximise the battery capacity exploitation for grid-and market-oriented services. Recent progress on wireless bidirectionality of charging technologies motivates the need for additional demonstrations with further improved efficiency¹⁹⁰. The focus of this topic is the development of the charging system, the integration of the system into the vehicle and its demonstration in real life operations. Limited optimisations concerning on-board systems not directly related to the wireless charging (e.g. BMS and battery) may be included if properly justified.

Proposals are expected to address **all** the following aspects:

- Design, develop and demonstrate cost-effective, standardised, safe, visually not intrusive, efficient technologies, solutions and user-centric services offered for bi-directional automatic wireless charging for road Light Duty Vehicles;
- Investigate ways to maximise efficiency through charging plate and power electronic design and positioning (such as auto-positioning of vehicle and/or transmitters/receivers) to increase comfort and social responsiveness of parking and stationary charging;
- Avoid detrimental effects from obstacles such as garbage or amounts of dirt that might interfere with the power transfer and/or might cause damage;
- Efficient system integration of bidirectional wireless charging infrastructures and services to support Renewable Energy Sources (RES) deployment, grid balancing, and investments analysis, making use of generative AI where beneficially applicable;
- Analyse the environmental footprint of the solution following a Life Cycle Assessment (LCA) approach including reuse, repair and recycling/recovery, in particular to reduce use of critical raw materials, and perform a Costs-and-Benefits analysis on the development and the deployment of the proposed solutions;
- Demonstrate solutions and services in at least three different urban areas (peri-urban and/or rural are excluded) within Horizon Europe participating countries considering different climatic conditions and for a period of at least three months;

¹⁹⁰ As examples, see projects funded under call FP7-TRANSPORT GC.SST.2013-1 and H2020- LC-GV-03-2019

- Exploitation of synergies with projects related to the Software-Defined Vehicle of the Future¹⁹¹ is encouraged where applicable.

This topic is a Societal-Readiness pilot:

- Proposals should follow the instructions applying to the Societal readiness pilot, as described in the introduction of the Horizon Europe Main Work Programme 2025 for Climate, Energy and Mobility. They entail the use of an interdisciplinary approach to deepening consideration and responsiveness of research and innovation activities to societal needs and concerns.
- This topic requires effective contribution of the relevant SSH expertise, including the involvement of SSH experts in the consortium, to meaningfully support Societal Readiness. Specifically, SSH expertise is expected to facilitate the socio-technological interface and enable the design of project objectives with Societal Readiness related activities.

The project(s) should contribute to the activities of existing working groups for the definition of standards for EV wireless charging.

The project(s) should take account Open Science, its practices and learning, and the project's results will be enacted in line with FAIR principles for data¹⁹².

Proposals should consider the involvement of the European Commission's Joint Research Centre (JRC) whose contribution could consist of performing experimental or desk-top research on Electromagnetic Compliance and Safety.

This topic implements the co-programmed European Partnership on 'Towards zero emission road transport' (2ZERO). As such, projects resulting from this topic will be expected to report on the results to the European Partnership 'Towards zero emission road transport' (2ZERO) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-04-D5-02: Cybersecure and resilient road e-mobility ecosystem (2ZERO Partnership)

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and

¹⁹¹ See Call HORIZON-KDT-JU-2023-3-CSA-IA, HORIZON-CL5-2024-D5-01-05 and HORIZON-JU-Chips-2024-1-IA-T3

¹⁹² Final Report and Action Plan from the European Commission Expert Group on FAIR Data, "TURNING FAIR INTO REALITY" - <https://op.europa.eu/en/publication-detail/-/publication/7769a148-f1f6-11e8-9982-01aa75ed71a1/language-en>

	selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁹³ .

Expected Outcome: Project results are expected to contribute to all the following outcomes:

- A (holistic) architecture integrating cyber-resilient hardware and software modules, such as Hardware Secure Modules considering state-of-the-art cryptographic primitives/technologies (e.g., Post-Quantum Cryptography) to enhance the security, resilience, and robustness of e-mobility systems;
- Implementation and demonstration in real-life environment of cybersecure e-mobility and system tools based on open-source framework, and on use cases for testing, verification, and certification;
- Guidelines towards future mitigation plans, such as advanced cryptographic solutions, over-the-air software corrections etc. for enhanced cybersecurity in short period of time;
- Guidelines towards a data breach response plan for the ecosystem as a framework that sets out the roles and responsibilities involved in managing a breach;
- Hardened Electric Vehicle Supply Equipment (EVSE) against natural hazards, vandalism and criminal tampering by cyber-attacks and physical intrusion.

¹⁹³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope: The system approach of the e-mobility entails the interconnection of several e-mobility actors with the technologies (EVs, EVSEs) and e-mobility users but also the establishment of communication interfaces among e-mobility/energy actors via different ICT systems, front-end and back-end systems. On one hand, the charging infrastructures should be open and accessible (to everyone, for all users, for all types of EVs, software systems, charging protocols and apps, communication networks) and, on the other hand, they must fully comply with the Cyber-Resilience Act (CRA) by November 2027 and hence be secured from hackers, criminals, and other malicious parties. It is critical to ensure that all these interactions are secured and reliable, also considering the transition of the automotive industry towards the software-defined vehicle (SDV) concept and the continuous Over-The-Air (OTA) software (SW) updates. A cyber-attack on any level of the e-mobility ecosystem may have financial and/or operational implications which might result in wider disruptions, up to nationwide power outage.

Proposals are expected to address **all** the following aspects:

- Develop a secure-by-design architecture and secure design principles encompassing all components and direct interfaces with EVs, EVSE, Charging Point Operators and E-Mobility Service Providers (EMSP) within the e-mobility ecosystem¹⁹⁴ considering governance models involving the roles and responsibilities of the different actors;
- Conduct a thorough threat analysis and risk assessment to identify potential security vulnerabilities within the ecosystem, also analysing the security of interfaces with all involved actors (e.g., EV Aggregators, Facility Managers, Flexibility Providers, Distribution System Operators, etc.) when applying V2X services;
- Define a comprehensive testing framework for penetration including reacting against live attacks to EVSE as well as to vehicle network on hardware (HW) and software (SW) components to uncover potential weaknesses and vulnerabilities, including behavioural aspects such as sub-standard repair or vehicle tampering;
- Implement a shared system of systems testing approach and develop co-designed verification and certification methods (also via Hackathon);
- Demonstrate in real-life operational environment the use of the framework for testing the cyber security and resilience of vehicles and charging infrastructure isolated and in connection to situations like charging, preparing for charging and payment processing;
- Compliance with existing standards¹⁹⁵ and best practices for security, resilience, and robustness of e-mobility systems for more secured systems should be ensured, making use, where applicable, of generative AI;

¹⁹⁴ The cyber security analysis for connected vehicles performed by the European Union Agency for Cybersecurity (ENISA) and Joint Research Centre (JRC) should be considered.

¹⁹⁵ Such as UNECE R155 or UNECE WP.29 (based on a ISO standard 21434), European CRA and the EC's PKI ecosystem governance and ISO15188-20, see also [Cyber Resilience Act Requirements Standards Mapping - Joint Research Centre & ENISA Joint Analysis — ENISA \(europa.eu\)](#)

- Extend Public Key Infrastructure (PKI) deployment, while considering emerging cryptography threats (i.e., quantum crypto) and exploring solutions, particularly focusing on pre-emptive measures against Post-Quantum Cryptographic attacks;
- Support to the set-up and implementation of the EC's PKI ecosystem governance based on ISO 15118-20 standard;
- Develop digital twins to help define vulnerable elements of infrastructure and identify measures for risk mitigation;
- Consider the HW/SW elements and communication channels spanning from vehicles to charging stations and the electricity grid as a proactive design to mitigate vulnerabilities across the entire chain;
- Exploitation of synergies with projects related to the Software-Defined Vehicle of the Future¹⁹⁶ is encouraged where applicable.

This topic implements the co-programmed European Partnership on 'Towards zero emission road transport' (2ZERO). As such, projects resulting from this topic will be expected to report on the results to the European Partnership 'Towards zero emission road transport' (2ZERO) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-04-D5-03: Safe post-crash management of road Light Duty Battery Electric Vehicles (BEVs) (2ZERO Partnership)

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 by the end of the project – see General Annex B. Activities may start at any TRL.

¹⁹⁶ See Call HORIZON-KDT-JU-2023-3-CSA-IA, HORIZON-CL5-2024-D5-01-05 and HORIZON-JU-Chips-2024-1-IA-T3

<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁹⁷.</p>
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Expected Outcome: Project results are expected to contribute to all the following outcomes:

- Significant improvement of vehicle designs (especially the design of the most recent battery pack and its integration into the vehicle) from the perspective of fire-hazard reduction, fire suppression, crashworthiness and post-crash handling compared with the baseline vehicle, following specific design guidelines;
- Advanced BEV condition assessment methods and tools with a focus on the condition of the battery as the most critical sub-system, providing safety-relevant information in a standardised format useful for rescue, towing and after-treatment services, complementing the digital battery passport, ensuring the safety of workers in all these phases, minimising environmental hazards and easy to apply by practitioners – towards standardised procedures;
- Re-purposing/re-using/re-cycling of batteries from crashed BEVs facilitated by tailored interventions, high confidence in battery health condition and standardised handover protocols, thus supporting potential second-life applications of batteries from crashed BEVs;
- Best practices in fire handling and fire suppression, rescue procedures and handling of crashed Light Duty BEVs applied all over Europe, supported by training material and instructions for ‘first responders’, such as firefighters and emergency service workers;
- Dispelling safety concerns of (potential) BEV users as well as policy/decision makers by science-based communication and comparative statistics.

Scope: In addition to protection during a collision, it is the post-crash phase, immediately after the collision, that is crucial for the consequences of a road crash. Vehicle fires are a key concern in this post-crash phase. While there are many similarities to fires in vehicles with Internal Combustion Engines (ICEV), road electric vehicle battery fires pose a range of new challenges to emergency responders and everyone handling EVs post-incident, including tow, repair, storage, salvage & wrecking. The rescue of victims, the safety of first responders and safe, efficient, and timely firefighting measures are key factors. The latter in particular poses

¹⁹⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

important challenges specific to road electric vehicles, amongst others due to the chemical composition of state-of-the-art lithium-ion batteries, the placement of the battery in the vehicles, enclosed in a water-tight, protective compartment, and the volume of water needed to cool a burning high-capacity battery. This is a challenge in particular in constrained spaces, such as in tunnels.

There is a need to support the definition of standards and procedures both in terms of risk but also in terms of response. With a focus on Light Duty Battery Electric Vehicles (BEVs), proposed actions will identify and further develop optimum technological solutions, processes and best practices towards future standards, design guidelines and official instructions / service regulations.

Proposals are expected to address **all** the following aspects:

- Vehicle health assessment tools after a crash, with a focus on the assessment of the battery and high-voltage system condition, ensuring that the HV battery is in a safe and stable condition (avoidance or early detection of thermal runaway after a collision), and maximising the likelihood of keeping the battery in service in the vehicle once fixed / re-using it, in line with the proposed regulation on circularity requirements, eco-design and end-of-life of vehicles. Both on-board monitoring systems and off-board systems can be considered;
- If making use of connectivity to on-board monitoring systems, the accessibility to the health and safety information / data needs to be addressed. This includes the development of state of safety and state of health algorithms to provide the remaining useful life and potential safety risks of the battery after a collision, complementing the information on the digital battery passport¹⁹⁸;
- Extrication procedures protecting both crash victims and emergency service workers to the best possible extent, also considering the gender dimension. To ensure the effectiveness of fire handling, suppression, and rescue procedures for crashed BEVs, it is crucial to further develop these practices in close collaboration with first responders;
- Fire extinguishing techniques and firefighting procedures for BEVs (if the case also including innovative fire extinguishing media), considering the risks specific for EV including potential toxic products of the associated chemical reactions, as well as vehicle designs supporting firefighting. Particular attention should be paid to the design of the battery pack and its integration into the vehicle, including auxiliaries;
- Develop and implement procedures and tools for the safe handover, handling, transport and storage of crashed BEVs, with wide dissemination to relevant stakeholders towards standardised procedures;

¹⁹⁸ With regard to monitoring techniques and algorithms, proposals are expected to coordinate and exploit synergies with research topic HORIZON-CL5-2024-D2-02-04 on “Accelerated multi-physical and virtual testing for battery aging, reliability and safety evaluation” under the Batt4EU Partnership.

- Quantify the rate and severity of BEV fire safety impacts by conducting a comparative study addressing aspects such as frequency of BEV fire and severity of outcome, and provide statistical analysis to deliver science-based communication on the safety of Light Duty BEVs to the general public;
- Real-life demonstration (in comparison to the state-of-art) of Light Duty (vehicle category M1 and N1) BEV condition assessment tools, data analysis, as well as firefighting, rescue, and handling procedures on a series production vehicle;

The project should actively seek interaction with and make use of results from workshops on EV fire safety currently being organised under the IEA HEV Technology Collaboration Programme, and where relevant with the Sustainable Transport Forum Task Force 6: “Developments for fire safe deployment of recharging points in covered parking garages”¹⁹⁹.

The project should take account Open Science, its practices and learning, and the project’s results will be enacted in line with FAIR principles for data²⁰⁰.

This topic implements the co-programmed European Partnership on ‘Towards zero emission road transport’ (2ZERO). As such, projects resulting from this topic will be expected to report on the results to the European Partnership ‘Towards zero emission road transport’ (2ZERO) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-04-D5-04: Extended lifetime of road Battery Electric Vehicles (BEV) (2ZERO Partnership)

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility</i>	The conditions are described in General Annex B. The following

¹⁹⁹ The Hybrid and Electric Vehicle Technology Collaboration Programme (HEV TCP) under the International Energy Agency (IEA) framework. <https://ieahev.org/tasks/49/>; The Sustainable Transport Forum (STF), Task Force 6 is in charge of “Developments for fire safe deployment of recharging points in covered parking garages” https://transport.ec.europa.eu/transport-themes/clean-transport/sustainable-transport-forum-stf/active-sub-groups/sub-group-best-practices-public-authorities-support-deployment-recharging-infrastructure-regex_en

²⁰⁰ Final Report and Action Plan from the European Commission Expert Group on FAIR Data, “TURNING FAIR INTO REALITY” - <https://op.europa.eu/en/publication-detail/-/publication/7769a148-f1f6-11e8-9982-01aa75ed71a1/language-en>

<i>conditions</i>	exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-6 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁰¹ .

Expected Outcome: Project results are expected to contribute to all the following outcomes:

- Holistic improved understanding of ageing and degradation of critical electric drive components relevant from a system integration point of view (fitting, mounts, connectors, sealings...) of Light Duty (vehicle category M1 and N1) BEV enabling user-centric designs for longer life and for higher residual values to minimise the environmental impact and to strengthen European resource sovereignty;
- 20 % higher residual value²⁰² through longer lifetime of BEV increasing material efficiency and productivity in comparison to baseline, state of the art vehicle;
- Future sustainable, economy-design concept evaluation for extended lifetime with minimum use of resources and re-use, recycle and End of Life (EoL) strategies applicable for advanced technology development;
- Advanced prospective/prescriptive maintenance and repair concepts to extend useful lifetime of BEV and minimise the used resources (20% reduction in resources in the use phase) and environmental footprint (5% reduction).

Scope: Currently, the value of a vehicle is mostly defined by driven mileage and age, underestimating the actual residual value. However, the real actual residual value of a BEV

²⁰¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁰² Reference UBA Study on “Illegal Treatment of End-of-Life Vehicles -Assessment of the environmental, micro- and macroeconomic effects”, <https://www.umweltbundesamt.de/publikationen/illegal-treatment-of-end-of-life-vehicles>, last visited 20.06.2024; the current additional revenue of an BEV (not considering materials and parts which are common with ICE) w/o the battery is estimated to be 120 € neglecting economic effects such as COVID. Correcting this one can assume that the electric drive train currently has a low residual value of » 250 € and the battery estimated to 2.000 €.

and its component should help implement Circular Economies (CE) strategies beyond classical shredding, such as reuse, remanufacturing, recovery of precious material. The residual value is determined by ageing and degradation in the use phase, repair and maintenance measures, operation of the vehicle and also by a CE-specific design. Consequently, prospective/prescriptive maintenance strategies, repairability and upgradability of vehicles must be addressed in relation to actual ageing and degradation of a component as part of upcoming CE strategies (including 9R approaches) to ensure longer (in terms of higher residual values) and more sustainable lifetimes of road BEV without over-sizing components and/or increasing the use of raw materials.

This topic focuses on the road BEV electric drive components relevant from a system integration point of view where high combined operational loads are to be expected, on the thermal management systems as well as on power electronics. The ageing and degradation of pack and module level is included whereas the battery cell level is excluded.

Proposals are expected to address **all** the following aspects:

- Analyse holistically the ageing and degradation of relevant, critical BEV functions and relevant sub-systems (excluding battery cells), that determine the Vehicle Lifetime and residual value under the aspect of functionality, safety and economic considerations (e.g., through correlating real-life operational loads with observed degradation and ageing effects);
- Develop tools and methods to assess, measure and predict ageing and degradation of relevant sub-systems (e.g. modelling combining multi-physical models describing ageing/degradations and vehicle operation and applying AI approaches, non-invasive evaluation to describe ageing and degradation over lifetime, multi-physical testing to accelerated occurrence of realistic ageing and degradation phenomena, use of novel sensors for measuring ageing and degradation in an electric drivetrain, etc.);
- Develop extended lifetime concepts and assess lifetime extension measures for BEV ensuring high residual values including right-sized design, operation, maintenance, refurbish and repair, by e.g. definition of prospective maintenance strategies, implementing ageing / degradation models into the design, advanced control strategies to minimise operational loads contributing to ageing and degradation phenomena including sensor technologies to obtain real-life operational data;
- For all relevant, critical components, follow the “digital product passport” approach, to achieve maximum traceability²⁰³;
- Data management for operational loads, maintenance, and repair measures;

²⁰³ The “Digital Product Passport” will provide information about products’ environmental sustainability. This information will be easily accessible by scanning a data carrier and it will include attributes such as the durability and reparability, the recycled content or the availability of spare parts of a product. https://ec.europa.eu/commission/presscorner/detail/en/ip_23_6257

- Validation and demonstration of concepts and designs for higher residual values (less aging and degradation under operational conditions) appropriate to the TRL level via a full physical demonstrator of all components of the electric drive-in representative laboratory environment.

The project(s) should take account Open Science, its practices and learning, and the project's results will be enacted in line with FAIR principles for data²⁰⁴.

This topic implements the co-programmed European Partnership on 'Towards zero emission road transport' (2ZERO). As such, projects resulting from this topic will be expected to report on the results to the European Partnership 'Towards zero emission road transport' (2ZERO) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-04-D5-05: Road Battery Electric Vehicles (BEV) optimised user-centric solutions for energy efficiency design and consistent range throughout weather conditions (2ZERO Partnership)

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the

²⁰⁴ Final Report and Action Plan from the European Commission Expert Group on FAIR Data, "TURNING FAIR INTO REALITY" - <https://op.europa.eu/en/publication-detail/-/publication/7769a148-f1f6-11e8-9982-01aa75ed71a1/language-en>

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁰⁵ .
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Expected Outcome: Project results are expected to contribute to all the following outcomes:

- Validated set of user requirements and usage acceptance limits, e. g. acceptable range loss for cabin climatisation, for different vehicle user groups (e. g. age, income, gender, location, regular usage models) in consideration of driving habits under various weather conditions as a basis for system development;
- Innovative and affordable Light Duty Vehicles (LDV) / Light Commercial Vehicles (LCV) energy management solutions demonstrated with a prototypical system (e. g. mock-up vehicle) in relevant environment and compared with State of the Art. Solutions should be cost effectively fulfilling and balancing user needs (from comfort and air quality aspects such as temperatures, humidity, CO₂, to driving range) under extreme weather conditions (-15°C to at least +40°C, aiming to +45°C);
- User and use case specific vehicle range loss (due to climatisation needs) at extreme ambient conditions will be reduced to user acceptance limits. Compared to State of the Art for an affordable system design, the range loss from normal operating conditions (e.g., 10 to 20 °C) to extreme ambient conditions will be reduced by at least 30% without increasing system cost (e.g. energy, battery and thermal management);
- Optimal energy management including integration of future smart cities standards (e.g., speed control, environmental forecasting, swarm information, smart energy management, grid peak load periods) resulting in 10% improvement of energy demand for the thermal system and the powertrain.

Scope: Preserving the benefits of right-sized batteries in terms of road BEV affordability, material resource and energy savings while reducing the impact of occasional extreme weather conditions on driving range for both LDV and LCV, especially during longer trips, calls for novel systemic approaches on thermal management. Finding solutions which adequately balance user needs, technical effort and vehicle affordability requires user research (e. g. user acceptance, preferences, and usage scenarios for the vehicles) to set relevant goals and criteria for innovation in the field of thermal management systems and technologies.

Automotive standards (e.g. ISO 7730, ISO 14505-4) should be met, keeping in mind that extreme weather conditions are a critical challenge and should be tackled not only with innovative or improved components, but especially with novel, user-centric and intelligent solutions based on an overall vehicle system approach (can include interface to infrastructure) to minimise energy and simplify thermal systems and which do not lead to increased system or vehicle cost.

²⁰⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Proposals are expected to address **all** the following aspects:

- Analyse user requirements to identify personalised thresholds of thermal comfort and their different expectations and behaviours, sensitivities, tolerances, and acceptance with regard to various use cases;
- Establish a holistic approach to optimising energy efficiency and relevant thermal functions (system-oriented and simplified solutions based on usage scenarios and inclusion of external data to use energy optimally and avoid oversizing that could also result from cascading engineering safety margins);
- Explore and exploit the potential that connection to the grid offers without overloading the grid especially during extreme weather conditions;
- Develop innovative, safe and intelligent solutions that reduce the loss of range within acceptable limits also addressing the balance of costs, usage models and system complexity when considering extreme weather conditions while meeting automotive standards under normal use;
- Develop innovative vehicle energy management solutions for seldom extreme weather conditions also using predictive energy management, e.g., AI-based functions and intelligent management of auxiliaries, in order to fulfil user preferences and tolerances;
- All developed solutions and concepts must be integrated in a prototype or mock-up vehicle and demonstrated on system level in a relevant environment.

The project(s) should take account Open Science, its practices and learning, and the project's results will be enacted in line with FAIR principles for data²⁰⁶.

This topic implements the co-programmed European Partnership on 'Towards zero emission road transport' (2ZERO). As such, projects resulting from this topic will be expected to report on the results to the European Partnership 'Towards zero emission road transport' (2ZERO) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-04-D5-06: Strategies, tools and concepts for optimised road Battery Electric Vehicles (BEV) long-haul logistics use cases (2ZERO Partnership)

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a

²⁰⁶ Final Report and Action Plan from the European Commission Expert Group on FAIR Data, "TURNING FAIR INTO REALITY" - <https://op.europa.eu/en/publication-detail/-/publication/7769a148-f1f6-11e8-9982-01aa75ed71a1/language-en>

	proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁰⁷ .

Expected Outcome: Project results are expected to contribute to all the following outcomes:

- Accelerated uptake of Heavy Duty (HD) Battery Electric Vehicles (BEV) across the EU and Associated Countries, through innovative logistics models, addressing the need to optimise battery size and charging strategies across various logistics scenarios;
- Enhanced reliability and effectivity of the road freight systems enabled by the development and implementation of software tools for decision making considering truck configurations, charging strategies, missions and efficient operational planning of routes and services, including charging and interoperable cross-border services;
- Increased portfolio of real-life HD-BEV operational demonstrations for long-haul and cross border operations and associated logistics models;
- Enhanced understanding of EU and Associated Countries stakeholders' needs for integrating HD-BEVs in logistics operations, also long-term novel usage models.

Scope: It is expected that by 2030 there will be around half a million of HD-BEV on European roads. Nonetheless, the current market application of these vehicles is largely confined to transport tasks with restricted range and considerable repetition. To expand their

²⁰⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

use, diverse strategies and applications must be explored and validated for scalability based on real data coming from logistics operators. The development of new application models should showcase the potential flexibility of HD-BEVs and assist end-users in establishing innovative usage frameworks and models.

Several actions are already underway for HD-BEV logistics (including the projects funded under the 2Zero topics HORIZON-CL5-2022-D5-01-08 and HORIZON-CL5-2024-D5-01-04) with a focus on extending range and charging capacity but also identifying challenges, gaps and impacts of HD-BEV usage in logistics operation. There is an urgent need to address these challenges and gaps for a smooth transition into daily operations and considering the wide variety of use cases and missions to be addressed.

Finding the optimal balance between the vehicle's configuration and available charging infrastructure for different logistics use cases is key to address the Total Cost of Ownership (TCO) challenge in the short and long term. This balancing will be enhanced by innovative logistics models and tools to further optimise logistics regional and long-haul operations in different regions in the EU and Associated Countries accelerating the deployment of HD BEVs for logistics.

Proposals are expected to address **all** the following aspects:

- Derive in-depth insights and lessons learnt from current long-haul transport missions in the EU and Associated Countries along major road arteries (e. g. the Trans-European Transport Network (TEN-T) corridors and nodes) towards overcoming the limitations determined by vehicle range and TCO and propose cost-effective HD BEV based logistics and operational models, building on modular vehicles set up and sound charging strategies. These models should include use cases across the EU and Associated Countries focused on long-haul transport missions and be based on existing, real operations data;
- Test and validate in real demonstrations new logistic operational concepts and models allowing a scalable deployment of HD-BEV in long haul transport missions optimising the different variabilities of a shipment (range, charging time, various European regions, drivers required break/rest times etc.).
- Develop and test associated digital tools for effective, robust integration in the overall logistics operations and fleets, and facilitating interoperable cross-border services. These associated digital tools – where relevant also developed as digital twins – are to enable and support efficient optimisation of the concepts, models, solutions and operations;
- Real-life demonstrations should be based on existing fleets of operators (e.g. haulers, shippers, freight forwarders) with different categories of vehicles and missions. Demonstration should at least include 8 different types of long-haul missions in different climatic conditions, including cross-border missions, and involve several logistic companies and/or logistic users;

- Develop scenarios for optimum balance of vehicles' performance and configuration, charging strategies and solutions. The scenarios will include information on the distance dependency as a function of vehicle combinations, location and capacity of charging stations and payload demands;
- The demonstrated concepts, models and tools should allow strategies for firm upscaling of HD-BEV implementation, taking into account the logistics operational models, the performance of complete vehicle combinations also considering the effects of on-board batteries on the ageing and energy recuperation;

The project(s) should take account Open Science, its practices and learning, and the project's results will be enacted in line with FAIR principles for data²⁰⁸.

This topic implements the co-programmed European Partnership on 'Towards zero emission road transport' (2ZERO). As such, projects resulting from this topic will be expected to report on the results to the European Partnership 'Towards zero emission road transport' (2ZERO) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-04-D5-07: Accelerating the circular transformation of the EU automotive industry

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries will be subject to the following additional obligations regarding open science practices: Open access to any new modules, models or tools developed from scratch or substantially improved with

²⁰⁸ Final Report and Action Plan from the European Commission Expert Group on FAIR Data, "TURNING FAIR INTO REALITY" - <https://op.europa.eu/en/publication-detail/-/publication/7769a148-f1f6-11e8-9982-01aa75ed71a1/language-en>

	<p>the use of EU funding under the action must be ensured through documentation, availability of model code and input data developed under the action.</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁰⁹.</p>
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Expected Outcome: Project results are expected to contribute to all the following outcomes:

- Widespread and shared understanding of circular economic principles with a harmonised approach across the full life-cycle value chain of road transport and beyond;
- Increased Europe's resource sovereignty, lower the environmental footprint, and strengthen the competitiveness of the European automotive-full life-cycle value chain;
- Definition of requirements and boundaries for a European circular economy eco-system in the automotive sector also towards possible definitions of future standards;
- Increased development and adoption of product passports and digital twins, further optimising reuse and remanufacturing of all possible components, systems and sub-systems and vehicle recycling;
- A roadmap for highly visible and focused European Pilot Projects (lighthouses) is developed that drives the industrial transformation towards circularity at an accelerated speed in the European automotive-full life-cycle value chain.

Scope: Proposals are expected to address **all** the following aspects, focussing on end-of-life strategies:

- Identify stakeholders and industrial sectors and implement all needed measures for a direct involvement:
 - o Support full life-cycle value chain stakeholder communities from European to regional levels;
 - o Map ongoing projects and remanufacturing processes and analyse existing industrial strategies and roadmaps within the automotive value chain;
 - o Design and implement a strong stakeholders' engagement process.

²⁰⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Analyse the full life-cycle value chain eco-system, identify bottlenecks, gaps, and hurdles for transformation towards a circular automotive industry;
- Support the implementation and awareness of AI-based tools and processes for open and closed material, systems and component loops that can significantly increase the end-of-life value, the re-useability and re-cyclability “by design” of all vehicle components and materials also in other industrial sectors;
- Assess the economic, environmental and societal impact of a future circular automotive industry (e.g., business cases and investments, contribution to the environmental footprint and the Green Deal objectives, job creation, competitiveness...), and analyse possible viable business models along the full life-cycle value chain (9R principles), within a circular automotive industry;
- Support the conceptualisation of a possible future European Pilot Project (lighthouse) “Recycling Factory of the Future” including viable business models, also analysing the spillovers to other sectors, and outlining a pathway towards its possible implementation with all relevant stakeholders of the full life-cycle value chain;
- Define and develop possible future product passports and digital twins.

Aviation

Proposals are invited against the following topic(s):

HORIZON-CL5-2025-04-D5-08: Next generation testing capabilities in strategic EU wind tunnels

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 15.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 3-5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions

	under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²¹⁰ .
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Expected Outcome: Project results should focus on new and adapted testing capabilities for next generation climate neutral aviation. Project results are expected to contribute to all of the following expected outcomes:

- Airframe transformative technologies, including airframe-propulsion integration;
- High aspect ratio and/or highly flexible unfuelled wing;
- Distributed hybrid/electric propulsion;
- Airframe and propulsion aeroacoustics;
- Further advancements of experimental simulation capabilities required for novel low-emission aircraft towards reducing further the lead times.

Scope: The new mission letter to Commission-designate for startups, research and innovation called for new long-term strategy to boost European Research Infrastructures, recognising the need to further strengthen the European research and technology linked to strategic facilities, as they can greatly contribute to the competitiveness of the European economy.

In parallel to ongoing research policy initiatives which aim to define the future EU landscape and funding programmes to support technology infrastructures, the advancement of science and technologies is necessary for the development of new and adapted testing capabilities. EU wind-tunnels is a prime example of such strategic capabilities towards climate-neutral aviation. The Horizon 2020 RINGO project has provided an analysis of needs, gaps and overlaps of European Aviation R&I Infrastructures, especially strategic infrastructures, in order to achieve Flightpath 2050 goals, while a recent internal effort has updated, refined and prioritised those findings.

The scope of this topic is focused on better understanding and further advancing critical technologies that require the update of relevant strategic EU testing capabilities, in particular wind tunnels. While new instrumentation and development of new testing procedures and digital tools is within the scope of this topic, other Research and Technology Infrastructure investments (i.e., buildings, auxiliary facilities, etc) fall outside of the scope.

The complexity of multi-disciplinary design and optimisation of future aircrafts requires extensive computational efforts, validated by wind-tunnel and propulsion testing. The scope of this topic is confined by strategic priorities and proposed aircraft concepts as defined in the

²¹⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

updated Horizon Europe Clean Aviation Strategic Research and Innovation Agenda. Emphasis is placed on airframe and propulsion transformative technologies, including the integration of advanced propulsion architectures on the airframe, distributed hybrid/electric propulsion, high aspect ratio and highly flexible unfuelled wing (e.g. for LH2 aircraft), boundary layer ingestion, ground effects in new aircraft architectures and aeroacoustics.

The projects should be aligned with the Fly the Green Deal vision and 2050 climate neutral aviation objectives and if possible, exploit synergies with other EU and National projects. In those cases that the participation of multiple testing facilities is required, the projects should also define and agree upon interfaces, common architectures and common data exchange formats.

HORIZON-CL5-2025-03-Two-Stage-D5-09: Next generation aircraft autonomy technologies for cockpit / pilot assistance applications

Call: Cluster 5 Call 03-2025 (2-stage) (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 2-4 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the</p>

	Research and Training Programme of the European Atomic Energy Community (2021-2025) ²¹¹ .
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Expected Outcome: Project results should contribute to the European civil aircraft cockpit technology roadmaps on crew assistance/automation/autonomy, with focus to next generation aircraft autonomy technologies for cockpit / pilot assistance applications.

Project results are expected to contribute to at least two of the following expected outcomes:

- Increasing safety in cockpits, by providing to the crew's assistance new systems or functionalities. with new capabilities for new aircraft platforms, new Human Machine Interface concepts and technologies.;
- Contribution to the roadmap of cockpits digitalisation and autonomy, by conceiving new cockpit capabilities, allowing an enhanced Human-System Relation (new ways for the crews to interact or collaborate with the cockpit). Technological breakthrough could bring to future cockpits the development potential necessary to take up the challenges of the next decades;
- Increased efficiency of cockpits performances: reduction of size, weight and power consumption (SWaP) of systems and equipment, reduced total lifecycle costs, integration levels by reduced production times and, first-time-right delivery.

Scope: Next generation aircrafts will be even more digital and automated, with more interactive and automated cockpits. This will be even more reliant on automation evolution and it is expected to mitigate an always-increased complexity of aircraft systems and operations, ensuring safe and efficient operations. However, automation is also prone to significant errors when misused or misunderstood, especially if this is combined with new aircraft platforms (incl. new systems/capabilities) or new types of operations.

The projects should develop new technology bricks in line with the aircraft concepts proposed in the updated Horizon Europe Clean Aviation Strategic Research and Innovation Agenda²¹² and possibly exploit lessons learned from the H2020-CS2 Large Aircraft Disruptive Cockpit Demonstrator²¹³. Synergies may also be sought with Horizon Europe SESAR Single Person Operations projects.

The technology bricks should be aligned with the needs of future aircraft generations and operations, new requirements, and cockpit philosophy of European aircraft integrators for the next generations of aircrafts, while they should be cyber-resilient and controlled by a single pilot and without the assistance of an on-board human co-pilot. Development of simulation tools, use of artificial intelligence models, human factors, and cost-benefit analysis (CBA) of

²¹¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²¹² <https://clean-aviation.eu/sites/default/files/2024-09/2024-Clean-Aviation-SRIA.pdf>

²¹³ <https://cordis.europa.eu/project/id/807097/results>

various technical solutions is within the scope of the topic. Interfacing with the European Union Aviation Safety agency (EASA) on safety and new testing and certification processes as well as alignment with the EASA AI roadmap should be considered, if applicable.

The focus is on development of new technologies up to TRL 4, rather than on integration and demonstration.

Waterborne transport

Proposals are invited against the following topic(s):

HORIZON-CL5-2025-04-D5-10: Innovative solutions for energy conversion and safety of low and zero-carbon fuels in waterborne transport (ZEWTP Partnership)

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 11.25 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 22.50 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio, grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within area A or B, as described in the scope of the topic, provided that the applications attain all thresholds (and subject to available budget).</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>The following cost categories will be ineligible costs: equipment costs linked to Carbon Capture Storage and Carbon Capture, Storage and</p>

	Utilisation.
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Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- The waterborne industry will have near-to-market solutions for the safe integration and use of low and zero-carbon fuel power conversion systems as the main power source for vessels above 5,000 Gross Tonnage (GT) with overall energy efficiencies at least 55% in shaft propulsion;
- Equipment manufacturers and ship owners will have access to a knowledge repository to support standardisation for using low and zero-carbon fuels and ensuring technical compatibility between the fuel and energy conversion system;
- Public authorities, port terminals and ship operators will have access to a knowledge repository to identify hazardous scenarios for low and zero-carbon fuels used in the demonstration and their potential impact in ports, including risk control options, as well as development of protocols for safe response operations in case of an accidental release of low or zero-carbon fuels;
- The EU waterborne industry, including shipyards and equipment manufacturers will gain an increased competitive advantage due to the development of innovative software demonstrating optimised integration of energy technologies;
- The workforce across the value chain, including on-board crews and port workers directly handling low and zero-carbon fuels and carrying bunkering operations, will gain competences and certified training in bunkering operations and port authorities' authorisations.

Scope: The International Maritime Organisation (IMO)'s Greenhouse Gases (GHG) revised strategy of 2023 and the FuelEU Maritime Regulation have set ambitious goals to reduce the use of fossil fuels in waterborne transport. To that aim, maritime operators are working to replace the currently used engines with alternative power conversion systems that will allow the use of low and zero-carbon fuels for propulsion. Among all ship-types, the decarbonisation of long-distance shipping will rely the most on successful innovative solutions with high power outputs. Apart from greenhouse gas emissions, other pollutants and harmful ship emissions (e.g., NO_x, SO_x, PM, etc.) coming from the fuel mix currently used in waterborne transport and from low and zero-carbon fuels need to be lowered and eliminated where possible. This topic aims to integrate and further develop various fuel cells (FC) and internal combustion engines (ICEs) solutions for waterborne transport running on low and zero-carbon fuels and scaling-up their technological maturity on-board. Actions addressing these challenges should also align with the European Economic Security Strategy.

Proposals should address one of the two following areas:

Area A: Projects demonstrating FC solutions should deliver results that will reach a combined power output of at least 5 megawatts (MW) with energy supply provided by low and zero-carbon fuels;

Area B: ICEs solutions should demonstrate a combined power output of at least 10 MW with at least 85% of the energy supply provided by low and zero-carbon fuels.

The two selected projects will be complementary, not demonstrating the same areas describe above. If in one of the areas no proposal meets the minimum thresholds, then only one project will be funded under this topic.

Regarding GHG emission reduction, proposals should follow the provisions of FuelEU Maritime and the IMO GHG reduction strategy on fuel standards.

Proposals should address all the following aspects, noting that appropriate consideration should be given to selecting a suitable design approach:

- One full scale demonstrator of a vessel above 5 000 GT, showing the potential of integrated systems for 100% energy load provision under normal operations;
- The demonstrated solutions identify their impact on air pollution, showing at least: i) 90% reduction of NO_x from IMO tier III; ii) sulphur emissions below 90% and; iii) a maximum of 5 mg/kWh of PM;
- Consider fuel flexibility and address cost impacts of energy efficiency, taking into account impacts on vessel CAPEX and OPEX plus the opportunity cost of increased power conversion and fuel storage size and mass;
- An innovative storage and handling solution on-board of ships and mixing of sustainable alternative fuels with sustainable or low carbon pilot fuels. In the case of proposals addressing Area B, solutions should demonstrate a reduction in the use of pilot fuels compared to solutions available on the market, aiming to avoid the use of pilot fuels altogether;
- Solutions developed and proven to prevent and mitigate slippage and fugitive emission factors related to the use of (1) low and zero-carbon fuels and (2) the remaining non-sustainable fuel used;
- Demonstrate optimised integration of energy technologies with overall energy efficiencies from fuel energy to shaft propulsion of at least 55%, able to operate on low and zero-carbon fuels and close to zero direct pollutant and harmful ship emissions;
- Identification of specific gaps in standardisation linked to the integration of the technologies researched and development of a roadmap to gather and disseminate the relevant data in support of standardisation, including communication and discussion with policy makers, industry, academic associations, and other relevant bodies;

- Development of parameters ensuring technical compatibility between the fuel and energy conversion system;
- Provide quantitative and qualitative validated risk and safety assessments and risk control options, including setting of safety rules and distances for bunkering, linked to the use of low and zero-carbon fuels on-board and impact in ports. Develop protocols for safe response through detection and dispersion modelling (both marine and atmospheric). Evaluate the relevant human and organisational risk factors, defining personnel protective equipment and adequate response techniques and equipment;
- The plan for exploitation and dissemination of results should identify adequate business cases and provide a roadmap for the deployment of the proposed technology, including plans for scalability, commercialisation, and deployment. The proposals should identify opportunities and propose strategies for further market uptake under the Innovation Fund and complementary bunkering needs under CEF AFIF (Connecting Europe Facility – Transport Alternative Fuels Infrastructure Facility);
- Development of material (including model courses with minimum requirements and a timeframe for achieving them) for training, reskilling, and upskilling of seafarers and port operators to use the developed solutions and operational procedures, for instance by leveraging the expertise and educational resources of leading training providers and universities;
- In addition to the full-scale demonstrator, proposals should also conduct 3 replication studies on the scalability and transferability of the proposed solutions in different ship types, demonstrating the viability of the new tools, methods and process required for the integration of the proposed solutions. The scope should include not just storage tanks, engines, or injection mechanisms but also virtual prototyping and hardware-in-the-loop testing for verification, especially for the (safety) automation systems. Impact on factors like load-steps, load acceptance, and vibrations should also be included, as to facilitate the design of high-performing, maintainable, and safe vessels must be taken into consideration;
- Development of relevant on-board after-treatment of specific pollutants sourced from low and zero-emission fuels (e.g., ammonia slip or N₂O for ammonia or formaldehyde for methanol);
- Proposals must justify how their objectives, results, intellectual property (IP) management and exploitation strategy contribute to the creation of EU added value and strategic autonomy throughout the supply and value chain. This includes the competitiveness of the EU waterborne industry, enhancement of the EU's R&I capacity, technological know-how capabilities and human capital, and resilience of the EU industrial and manufacturing base. Proposals are encouraged to prioritise shipyards, equipment manufacturers and suppliers located in the EU and EEA.

Additionally, proposals are invited to prove the utilisation of big data and data science technologies to determine real-world references regarding ship performance, environmental impacts and maintenance needs of ships operating on low and zero-carbon fuels.

This topic implements the co-programmed European Partnership on ‘Zero Emission Waterborne Transport’ (ZEWT). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Zero Emission Waterborne Transport’ (ZEWT) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-04-D5-11: Demonstration of battery energy storage systems in existing and new vessels via novel energy storage and ship design concepts (ZEWT Partnership)

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio, grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within area A or B, as described in the scope of the topic, provided that the applications attain all thresholds (and subject to available budget).</p>

Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

- Demonstrated 40% increase in fully electric long-distance autonomy for maritime vessels above 400 Gross Tonnage (GT) or inland river vessels above 86 meters, using batteries as the primary energy source;
- Demonstrated innovative solutions in energy storage concepts, energy efficiency or rapid in-route charging;

- Measures to increase the connectivity between islands and their connections to mainland are proposed and modal shift of cargo from road to inland waterway transport is fostered by presenting solutions ready for practical deployment;
- Improved lifetime and safe use of batteries in waterborne transport by addressing the operation, degradation and failure modes associated with unique waterborne transport operating conditions;
- Contribution to the competitiveness and strategic autonomy of the EU waterborne sector. The EU waterborne industry, including shipyards and equipment manufacturers will gain an increased competitive advantage through the development of key and cost-effective solutions for high energy densities storage systems and battery electric ships.

Scope: Batteries are highly efficient carriers of renewable energy and their increased utilisation in various waterborne transport applications enables the decarbonisation and depollution of waterborne transport. Full battery-electrification is already being demonstrated for small and medium-scale vessels. This action aims to increase the range of fully-battery-electric operation of waterborne transport vessels on this range of size. Actions addressing these challenges should also align with the European Economic Security Strategy.

Proposals should address full scale demonstration of battery- electric operation in one of the two following areas:

1.
 1. Area A: seagoing vessels over 400 GWT
 2. Area B: inland river vessels above 86 meters

Proposals are expected to address all of the following aspects

- Demonstrate 40% increase in the vessel operating range with battery as the primary source of propulsion with respect to a 2024 state-of-the-art full electric baseline. The solutions should allow an operation range of at least 120 nautical miles (or equivalent, as appropriate for other applications) and be applicable to representative operating conditions of the chosen area (Area A: appropriate sea states; Area B: upstream and downstream operation on relatively free-flowing parts of major rivers). Proposed solutions can either be suitable for newbuilds or for retrofits on existing vessels. Project proposals should clearly indicate the baseline range, the expected range as an outcome of this project, and the corresponding operating conditions;
- Innovative measures for range extension, which should go beyond the simple scaling up of existing commercial battery systems to increase the range. Solutions are expected to include one or more of the following:
- New onboard energy storage system concepts enabling high energy-densities suitable for different waterborne applications;

- Innovative onboard energy efficiency measures including but not limited to, thermal management, electrical architecture, high voltage electrical components, energy management and energy modelling for optimal operation including weather routing, integration of renewable energy technologies (e.g. photovoltaic panels, wind-assisted propulsion), and improved vessel hydrodynamic efficiency;
- Concepts for extending the operating lifetime of batteries through advanced architecture, onboard monitoring, control, and analytics;
- Concepts for rapid in-route charging or battery replenishment while maintaining desired operating schedules. Fast charging and onshore power supply (OPS) concepts should adhere to the IEC/IEEE standards which are under development, and the consortium is expected to liaise with the technical committee in IEC/IEEE and converge technical solution with standard under development. Other solutions enabling intermittent in-route power transfer to vessels may also be demonstrated.
- Development of guidelines/recommendations for the safety assessment of the novel installations based on field testing. This should build on established safety guidelines and requirements such as the Guidance on the Safety of Battery Energy Storage Systems onboard ships (from the European Maritime Safety Agency – EMSA) and the requirements for fixed and swappable batteries on inland vessels (from the European Committee For Drawing Up Standards In The Field Of Inland Navigation – CESNI), as applicable, and contribute to their applicability to a wider scope of novel electrification solutions. Furthermore, recommendations for improving the guidelines and extending them to the demonstrated new battery installation solutions should be presented. Regulatory aspects for the pertinent safety-critical ship systems as well as fire safety solutions for the battery room should also be addressed;
- Replication case studies showing the applicability of the developed solution under emulated conditions for at least two other waterborne applications. The studies should demonstrate the opportunities of the developed solution, including the conditions under which the target of 40% range extension can be achieved, and provide an outlook of how this can lead to further range extension in the future. These studies should pave the way for further exploitation and market uptake activities as requested in the following point;
- The plan for exploitation and dissemination of results should identify adequate business cases and provide roadmap for the replication and deployment of the proposed technology, including plans for scalability, commercialisation, and deployment. Proposals should identify and propose opportunities for further market uptake under the Innovation Fund and complementary bunkering needs under CEF AFIF (Connecting Europe Facility – Transport Alternative Fuels Infrastructure Facility);
- Development of material for training, reskilling and upskilling of seafarers and shore-based personnel to use the developed solutions, by leveraging the expertise and educational resources of leading training providers and universities;

- Proposals must justify the contribution of their objectives, results, intellectual property (IP) management and exploitation strategy to the EU added value creation and strategic autonomy throughout the supply and value chain, including competitiveness of the EU waterborne industry, enhancement of the EU's R&I capacity, technological know-how capabilities and human capital, and resilience of the EU industrial and manufacturing base. Proposals are encouraged to prioritise shipyards, equipment manufacturers and suppliers located in the EU and EEA.

Additionally, proposals are invited to prove the utilisation of big data and data science technologies to determine real-world references regarding ship performance, environmental impacts and maintenance needs of ships operating on low and zero-carbon fuels.

This topic implements the co-programmed European Partnership on 'Zero Emission Waterborne Transport' (ZEWTP). As such, projects resulting from this topic will be expected to report on results to the European Partnership 'Zero Emission Waterborne Transport' (ZEWTP) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-04-D5-12: Real-time, adaptative and innovative energy management solutions to optimise fuel consumption and lower emissions pollutants in waterborne transport (ZEWTP Partnership)

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-6 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ²¹⁴ .
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Expected Outcome: Project results are expected to contribute to all the following outcomes:

- Ship operators will benefit from the use of Artificial Intelligence (AI), using techniques such as Machine Learning (ML) and Machine Reasoning, and improved instrumentation, as well as on monitoring and control systems to optimise ship operations, while integrating new fuel types, power conversion systems, propulsion and heat systems, wind-assisted propulsion, innovative energy storage systems (beyond conventional batteries), and other energy efficiency solutions;
- Improved supervision, forecasting, and real-time control of the full spectrum and complexity of ship energy needs and flows and sea state, according to the variety of operation profiles (i.e., ship energy dynamics, varying -especially low- water levels);
- Development of adaptable real-time optimisation strategies to accommodate expected and unforeseen operational conditions;
- Improved calibration and certification of sensing systems, including low-cost innovative real-time sensors, to support the enforcement of Greenhouse Gas (GHG) emissions reduction, as well as SO_x and NO_x emissions regulatory framework, both at a European (e.g., Sulphur Directive, NRM Regulation) and international level (e.g., MARPOL Annex VI), as well as the reduction of emissions of any other relevant harmful emissions, leading towards common operational procedures, methodologies and reporting;
- Improved ship design concepts including lessons learnt from energy efficiency optimisation, considering various parameters that influence ship performance under diverse operational conditions (e.g., wave characteristics, wind strength, hull biofouling growth rate, low water levels/droughts).

Scope: Energy Management Systems (EMS) have the potential through adaptive control, ML and AI to optimise energy demand and minimise harmful emissions. This paradigm shift will also lead to increase vessel efficiency through pioneering assessments and optimised integration of groundbreaking power conversion and energy storage systems, Waste Heat Recovery (WHR) systems, machinery prognostics and system simulations, variable speed electric motors, and both centralised and modular energy micro-grid architectures. In parallel, such advancements allow for real-time exhaust gas monitoring, including particulates, SO_x, NO_x and GHG emissions, which could be integrated into the overall monitoring and adaptive control.

²¹⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Proposals are expected to address all the following aspects:

- Development, adaptation, and integration of real-time monitoring solutions for continuous mapping of ship operating profiles, energy flows, Greenhouse Gas (GHG) emissions, as well as SO_x, NO_x and other polluting emissions (e.g., emissions from methane slip), including the assessment of potential ammonia environmental footprint;
- Development of advanced monitoring, supervision and forecasting models, by capitalizing on AI and ML capacities for real-time data analysis and feedback, considering both internal and external data sources; comprehensive machine learning and machine reasoning models should enable intelligent vessel performance monitoring and supervision, vessel operation optimisation and planning;
- Design of centralised or modular ship energy architecture, including micro-grid architectures, applicable to a variety of commercial ship types, and adaptive energy management systems to improve the overall vessel energy efficiency, through energy demand reduction and energy supply efficiency;
- Showcase the flexibility of the adaptive energy management system using simulation methods for different vessels having various propulsion system types, operating in a wide range of environmental conditions;
- Assessment of design, including retrofitting, and operational measures and controls by focusing on three (3) complementary case studies, on, Inland Waterways Transportation (IWT), coastal shipping and Deep-Sea Shipping (DSS), aiming at maximising vessel efficiency, in the context of designing for efficiency.

This topic implements the co-programmed European Partnership on ‘Zero Emission Waterborne Transport’ (ZEWT). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Zero Emission Waterborne Transport’ (ZEWT) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-04-D5-13: Novel holistic intelligent tools for variable retrofit and decarbonised scenarios (ZEWT Partnership)

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Innovation Actions

<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²¹⁵ .

Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

- Novel holistic intelligent tools for variable retrofit scenarios and new operational modes will be developed and then demonstrated by the application to a retrofit ship test case;
- Measures to overcome the limitations of current generation of design tools will be proposed which currently do not account for the interferences and mutual influences among the various retrofit systems installed on board;
- Contribution to the retrofitting of existing aging fleets in the EU;
- Increased competitiveness of European shipyards, marine equipment providers and repair yards in the maritime green technology sector through the development of cost-effective solutions, that support ship-owners in making the European fleet climate neutral and still competitive;
- Accelerated regulatory approval processes, best practice guidance, and easy-to-customise strategies for retrofitting by reducing the commercial risk of deployment for ship owners.

Scope: In the quest to get energy reductions from retrofitting, new design requirements and constraints are emerging, e.g., due to the introduction of new low-carbon fuels, and new added propulsion systems (e.g., wind assisted systems). Furthermore, other technical

²¹⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

measures are not yet “standardised” for retrofitting existing ships, due to other difficulties or high costs.

There is also a lack of design/retrofitting experience in applying these new solutions. A practical example is the space rearrangement in the electrification of the ship, including the installation of heavy battery sets, a solution that uses space: but changing ship’s volume and weight distribution along the beam might have a strong effect on the dynamic stability of the vessel.

The realisation of *ad-hoc* web tools and guidelines to help with the retrofit task is currently under development, based on the limited number of new small-scale demonstrators within ongoing projects (e.g., Green Marine, RETROFIT55, etc.).

These approaches combine mature and new technologies creating a decision-support system (DSS) that integrates these solutions. However, even if the final results have not been delivered yet, these projects are considering the retrofit problem in a silo-based mode, that is not including a full multidisciplinary design optimisation with the mutual interactions among the technologies. This might lead to difficulties in achieving overall optimal goals, therefore *resulting in a limited impact* on the transition to zero-emission waterborne. These simplified strategies are indeed not accounting, in a full coupled mode, for the *interferences* and *mutual influences* among the different retrofit systems installed on board (i.e. available space and payload, safety constraints, electrical constraints, etc.): in other terms, they are not considering the *global problem* of retrofitting in a *holistic* way, which is a major objective of this call. Also, the holistic intelligent tools could explore possibilities for modular or serial solutions which reduce costs of retrofitting.

Furthermore, in the short and medium term we are and will be observing multiple ongoing regulatory processes (by IMO, EU, UNFCCC, ES-TRIN) developing frameworks and standards that will shape waterborne transport in the next decades. This further element of variability, i.e. the uncertainty in decarbonisation ambitions as well as on the variability in cost and availability of carbon-neutral fuels, not considered yet in the current approaches, claim for a large effort for new holistic retrofit intelligent design tools for exploring multidisciplinary solutions in variable decarbonisation scenarios.

Innovative holistic intelligent design tools, with a multi-objective strategy and AI simulators, have to be developed rapidly and tested if we want to significantly contribute to the transition to zero-emission waterborne transport, and this has to be done by integrating the many sectors involved in the design.

Proposals are expected to address all the following aspects:

- The development of a novel intelligent design digital tool which can fully integrate decarbonising concepts (e.g., alternative fuel propulsion systems, auxiliary propulsion systems, renewable energy sources, etc.) and can be used for retrofit concepts;
- The design digital tool should have the capability of considering together multiple decarbonisation solutions for operating vessels, accounting for reciprocal influences, and

be able to integrate existing loading instrument (software or data package) for stability, weight and hull strength control;

- Retrofit configurations might include changes in operational modes (e.g., slow steaming, weather routing, etc.) which should also be evaluated against human and organisational risk factors introduced;
- The design tool should also include a life-cycle perspective from design to scrapping;
- Preliminary (intermediate) validation of the design tool by testing at model scale original versus refitted ship solution, also assessing the environmental impact of the solutions, including on biodiversity, air quality and aerial and underwater noise;
- Final demonstration, applying the tool in six virtual demonstrations, one for each one of the six ship types detailed in the Strategic Research and Innovation Agenda of the Zero-Emission Waterborne Transport Partnership, considering together multiple decarbonisation solutions and producing final optimised refitted designs to be tested in operational environment conditions with a given operational profile. Participation of ship owners and operators to these virtual demonstrations should be ensured to pave the way to further market deployment of the solution and real retrofitting operations.

This topic implements the co-programmed European Partnership on ‘Zero Emission Waterborne Transport’ (ZEWT). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Zero Emission Waterborne Transport’ (ZEWT) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-04-D5-14: Flexible and mobile solutions for Onshore Power Supply (ZEWT Partnership)

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 8 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant</i>	The rules are described in General Annex G. The following exceptions apply:

<i>Agreements</i>	Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²¹⁶ .
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Expected Outcome: Proposals should cover one of the following outcomes:

- Area A: port authorities and ship operators have fully flexible and mobile solutions to ensure that onshore power supply (OPS) can be provided within and across different terminals and port areas maximising operational benefits for port authorities, terminal and ship operators, optimising deployment or;
- Area B: port authorities have available solutions to provide OPS at anchorage areas to different vessel types and different port environments in different conditions (physical and operational) to optimise OPS deployment and investments.

In addition, project results are expected to contribute to all of the following expected outcomes:

- Ship and port operators benefit from cost-efficient innovative solutions for flexible and mobile OPS for ships at shore or OPS at anchorage areas, for Low and High Voltage installations beyond the deployment actions taking place to meet the requirements of FuelEU Maritime and AFIR set by 2030, towards the policy goals set by 2050.
- Terminal and ship operators have available mature mobile and flexible OPS or OPS at anchorage solutions applicable to the different ship types and services and port environments, with a special consideration to safety explosive atmospheres and dangerous zones;
- Ship and port operators have standards, protocols and/or solutions aiming to bridge the gaps identified during the project for the implementation of fast charging as well as mobile and flexible OPS or OPS at anchorage areas;
- Ship operators, grid managers and energy suppliers have solutions to prevent electrical failures and for earthing monitoring, with a particular focus on OPS mobile and flexible solutions or OPS at anchorage areas.

Scope: OPS solutions currently available in the market, while conforming to standards, have gaps in terms of flexibility and modularity, in particular regarding the expected future demand in terminals with a high turnover of diverse waterborne traffic served. OPS port infrastructure

²¹⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

solutions so far are static or have limited flexibility at the berth, whereby several static connections are needed to cover port requirements. As an alternative or supplement, further research is needed in OPS solutions that allow OPS to be provided within and across different terminals and port areas. Solutions developed under this topic should be generally applicable, so they can be used for several types of vessels. However, the solutions should consider the special features of the different ship types and services, such as the safety requirements for tanker and chemicals traffic where connectivity in complex environments is an issue.

Following Fit-for-55 OPS requirements in AFIR and FuelEU Maritime, new Onshore Power Supply products are being developed, including High-Voltage OPS systems, within a framework of robust standardisation. However, further research is needed on the mature, flexible and safe provision of OPS at anchorage and in a flexible way along different terminals and port areas through technologies other than barges, applicable to a wide range of ports with different geographies and conditions.

The development of solutions to simultaneously provide OPS, fast battery charging as well as loading operations needs further standardisation and dedicated protocols. Standardisation of fast battery charging is underway; therefore, proposals are encouraged to explore relevant research for fast battery charging beyond the current or soon to be adopted standards (e.g., IEC/EEE 80005-4) to be implemented in the developed solutions for OPS at anchorage or mobile and flexible OPS.

Proposals should address all the following aspects:

1. Demonstrate innovative scalable OPS solutions as described in the expected outcomes, addressing either Area A or Area B.
2. Minimise the risk of system failure and ensuring continuous operation, resilient to adverse climate conditions;
3. Identify remaining gaps in standardisation for the solutions developed and define recommendations for standards, protocols and/or solutions at least for safe fast battery charging. Projects addressing Area B should also address these activities for load/unload cargo operations simultaneously;
4. Research into systems that can simultaneously provide fast battery charging and OPS;
5. Development of earthing protection solutions through monitoring of the grounding resistance to predict failure;
6. All solutions should align with the optimisation of onboard High Voltage transformers, automation of onboard connection systems, optimisation of onboard OPS switchboard operation, and onboard safety monitoring systems and blackout prevention/mitigation systems to synchronise process and the communication between ship and shore;
7. Adequate training and support for crew and port staff are crucial for the successful implementation and operation of the solutions developed training programs should

encompass system operations, maintenance procedures, safety protocols, and emergency response protocols to ensure safe and efficient operations.

This topic implements the co-programmed European Partnership on ‘Zero Emission Waterborne Transport’ (ZEWT). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Zero Emission Waterborne Transport’ (ZEWT) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-04-D5-15: Optimal integrated onboard renewable energy solutions, by considering Wind-Assisted Propulsion Systems (ZEWT Partnership)

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.50 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Development and demonstration of a standardised methodology for monitoring, recording and verification of energy used from Wind Assisted Propulsion devices directly into ship propulsion. The methodology is expected to allow integration of wind energy used in propulsion of ships directly into calculations of GHG intensity of the energy used on-board, both in context of Fuel EU maritime and International Maritime Organization (IMO) Life Cycle assessment (LCA) guidelines;
- Provision of a standardised framework to ensure certainty in the claims regarding fuel, Greenhouse Gas (GHG) and other polluting emission reduction by Wind-Assisted Propulsion (WAP) systems, strengthening the implementation of the FuelEU Maritime Regulation;
- Uniform rules, regulations, assessment criteria, and sea-trial procedures for WAP solutions are explored and established, facilitating the market uptake of WAP systems;
- Standardisation efforts to implement the IMO Life-Cycle Assessment (LCA) guidelines are supported;

- Market uptake of WAP systems into existing vessels in the coming decade is facilitated, by introducing a set of standardised design alternatives and criteria for decision-making, as part of a standardised framework;
- Concerns about the safety and operational impacts on ships, port and other land infrastructure are addressed, as well as the lack of market confidence in the technology;
- Contribution to the competitiveness and strategic autonomy of the EU waterborne sector, in line with the Communication on European [Economic Security Strategy](#). The EU waterborne industry, including shipyards and equipment manufacturers will gain an increased competitive advantage through the development of key and cost-effective solutions for WAP systems.

Scope: WAP systems (e.g., rotor sails, rigid wing sails, soft wing sails, ventilated foil system, etc.) have gained significant attention as means of reducing ship fuel consumption, and GHG and other emissions, while they are also considered as primary means of propulsion for future newbuilt cases. Several ongoing EU-funded projects are already working on WAP systems with focus on holistic optimised ship design, control, and operation, including changes in conventional propeller propulsion, and focused on Deep Sea Shipping (DSS). However, there is still a variety of barriers and challenges that need to be addressed; the main challenges are to provide certainty on emission saving performance, define standards, while also facilitating WAP retrofitting. The aim of the topic is to develop a methodology that will allow to quantify and monitor the real impact of WAP systems into ship propulsion.

Proposals are expected to address all of the following aspects:

- Demonstration of at least one full scale WAP solution and its management and monitoring on-board. This demonstration will be used to also validate the methodology for integration of the energy provided by the WAP devices to the ship propulsion;
- Develop a holistic framework for the design optimisation for wind-assisted propulsion, either as a means of enhanced energy efficiency, or primary propulsion solution; the framework should work as design tool to facilitate the industry uptake of WAP technologies by introducing tailor-made solutions for various ship types, based on their operational profiles and navigation routes;
- Use of systems for advanced monitoring of energy consumption, performance optimisation, energy savings, mitigation of GHG and other polluting emissions. The project should make optimal use of state-of-the-art sensor and digital technologies with a view to achieve continuous monitoring of energy made available from WAP devices; methodology should cover various types of WAP and should be applicable for all types of ships and operations;
- Assessment of environmental and wider benefits, including reduced emissions of air and water pollutants, underwater noise, biodiversity as well as cost-effectiveness for either

standalone WAP solutions or combinations with other low and zero-emission technologies and/or energy efficiency measures;

- Focus on safety and operational aspects, for addressing any technical and operational challenges that may arise from the introduction of WAP systems – and possible combinations with other energy efficiency solutions – for ships and ports, including other land infrastructure;
- Addressing scalability and adaptability issues to the existing fleet, such as efforts to promote the standardisation of the different solutions, and application of the solution considering the real environmental conditions and the impact of climate change in wind patterns;
- Examine a variety of business cases and propose a number of market measures to address the lack of market confidence in WAP solutions and the uptake of such systems in the maritime industry.

Proposals are expected to explain the contribution of their objectives, results, IP management and exploitation strategy to the EU added value creation and strategic autonomy throughout the supply and value chain, including competitiveness of the EU waterborne industry, enhancement of the EU's R&I capacity, technological know-how capabilities and human capital, and resilience of the EU industrial and manufacturing base.. Proposals are encouraged to prioritise shipyards, equipment manufacturers and suppliers located in the EU and EEA.

This topic implements the co-programmed European Partnership on 'Zero Emission Waterborne Transport' (ZEWT). As such, projects resulting from this topic will be expected to report on results to the European Partnership 'Zero Emission Waterborne Transport' (ZEWT) in support of the monitoring of its KPIs.

HORIZON-CL5-2025-04-D5-16: Support of the new EU renewable and low carbon fuel ecosystem for waterborne transport

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant</i>	The rules are described in General Annex G. The following exceptions apply:

<i>Agreements</i>	Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²¹⁷ .
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Expected Outcome: Project's results are expected to contribute to all the following expected outcomes:

- EU Fuel producers, fuel infrastructure developers and bunkering facilities will jointly benefit from the creation of relevant business models that will accelerate the deployment of renewable and low carbon fuels for waterborne transport.
- EU Fuel producers will become more competitive in the production of renewable and low carbon fuels for waterborne transport.
- Significant increase of pipeline projects supported by various programmes and institutions in relation to renewable and low carbon fuels production and usage.
- Developing a diverse portfolio of scientifically sound mature proposals for the deployment of technological solutions to reduce Greenhouse Gas emissions, in line with the EU climate targets, especially taking into account the Fitfor55 package.
- Added value creation and increased competitiveness within the EU waterborne transport fuel ecosystem.

Scope: The European Commission is currently involved in several initiatives that aim to accelerate the deployment of solutions relevant for the market uptake of renewable and low carbon fuels. Firstly, following the initiative from the Commission, the EU has adopted FuelEU Maritime Regulation, which sets the binding reduction targets for GHG intensity of energy used on board for maritime vessels. As a flanking measure to this regulation, the Commission has promoted the Renewable and Low Carbon Fuel Alliance, which encompasses a large portion of all fuel producers, with the goal to facilitate the investment in renewable and low carbon fuels for waterborne and aviation, aiming to clarify feedstock availability, demand, and supply forecast, and to promote a commercial pipeline of projects.

The Revised ETS directive has put shipping under the umbrella of ETS with corresponding revenues to be allocated to green shipping projects. Consequently, the Commission is preparing the first dedicated calls under the Hydrogen Bank, focusing on maritime applications.

²¹⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

In the context of international collaboration, the Commission is currently working, together with the Joint Research Centre, on a study about the Global Gateway Green Shipping Corridors (GGGSC). This report aims to identify ports outside of the EU of strategic interest to the bloc that can be part of such corridors and to aggregate them into corridors that meet a combination of policy priorities. In this context, the Commission will also look into possible actions to support partner countries to ensure the availability of renewable and low carbon fuels within the selected ports.

In addition, the Commission has published a number of studies, including on the “Development of outlook for the necessary means to build industrial capacity for drop-in advanced biofuels”²¹⁸ and has published a call for a second tender for a study on “How to mobilize industrial capacity building for advanced biofuels”²¹⁹. The EIB published the study [“Financing sustainable liquid fuel projects in Europe: Identifying barriers and overcoming them”](#) in May 2024. In addition Horizon Europe includes a call [“HORIZON-CL5-2024-D3-02-13: Support to the activities of the SET Plan Key Action area Renewable fuels and bioenergy”](#), with deadline in February 2025. Advanced biofuels are also an option for renewable energy supply in waterborne transport. Furthermore, under topic HORIZON-CL5-2023-D2-01-07: Support for the deployment of R&I results for climate mitigation, five coordination and support actions have been selected. Synergies should be drawn in relation with the Innovation Fund program.

Projects are expected to take the previous initiatives as a starting point and go beyond their conclusions. In particular, they must address all of the following aspects:

- Provide project development support to at least 20 proposals²²⁰ within the renewable and low carbon fuel ecosystem for waterborne transport in order to increase the number of applications in programmes such as Horizon Europe and its successor, Innovation Fund, CEF AFIF and schemes such as EIB Loans, structural funds, as well as initiatives at national and regional level and at international level within the Global Gateway strategy. The proposal should consider coordination of their activities with already existing EU project assistance providers such as the EIB Advisory project development assistance scheme, avoiding duplication. Proposals will propose KPIs in relation with additional projects and activities to be performed thanks to its action. The support to projects should be provided following a competitive selection process, prioritizing projects admitted to the RLCF Alliance Project Pipeline and/or Global Gateway. The proposal shall elaborate on project selection methodology.
- Creation of an analytical financial tool which allows users to model a project and understand the economic rational of a business case and identify those assumptions, drivers and barriers which are critical to ensuring that the underlying projects are financially and economically viable. The projects for which the analytical tool will be

²¹⁸ [Development of outlook for the necessary means to build industrial capacity for drop-in advanced biofuels - European Commission \(europa.eu\)](#)

²¹⁹ Call for tenders CINEA/2024/OP/0005 STUDY ON HOW TO MOBILIZE INDUSTRIAL CAPACITY BUILDING FOR ADVANCED BIOFUELS

²²⁰ Individual proposals will not be considered public deliverables to ensure full confidentiality

developed are those which produce renewable and low carbon fuels necessary for the sustainable goals of the waterborne transport sector, as defined in the Green Deal, especially by ensuring a wide European geographical coverage in the EU. These models must take into account the results delivered through the Roundtable 4 of the RLCF Alliance in their financial analysis. The models will aim to preserve the industrial competitiveness of the EU industry, in alignment with RED, FuelEU maritime and ETS, also considering any potential unlevelled playing field risks/challenges vis-a-vis other countries outside the European Union. These models will examine the scalability potential of the fuel considering production, transport and distribution, security of supply in ports in and outside Europe, GHG emission saving on Well to Wake basis, distance continuously sailed on the fuel, size of ship in terms of installed power, total distance sailed and transparency on the project costs. Additionally, these models will also aim to leverage potential synergies between RFNBOs and advanced biofuels technologies development should be identified and utilized for the benefit of both pathways. Appropriate linkage to the RLCF Alliance is encouraged.

- In collaboration with the RLCF Alliance, develop and conduct a series of workshops/trainings with financial institutions and relevant waterborne stakeholders to facilitate the market uptake of waterborne and renewable and low carbon fuel production solutions for waterborne transport, with a particular attention to the access to capital for demonstration projects with a higher technological risk profile and dissemination of best practices to access financing and funding. The project will need to carry out relevant dissemination activities to communicate the results of the project to all relevant policy makers as well as stakeholders from the industry and civil society.

Transport-related health and environment

Proposals are invited against the following topic(s):

HORIZON-CL5-2026-01-D5-17: Real time monitoring of regulated and non-regulated emissions from all types of vessels and other port activities in order to enforce emission limits in waterfront cities

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.00 million.
<i>Type of Action</i>	Innovation Actions

<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>The page limit of the application is 70 pages.</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>At least one of the ports must be situated in a city participating in the Climate-Neutral and Smart Cities Mission. The demonstration activities must take place in a real operational environment.</p>
<i>Technology Readiness Level</i>	<p>Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Grants awarded under this topic will be linked to the following action(s):</p> <p>HORIZON-MISS-2021-CIT-02-03</p> <p>Collaboration with the Cities Mission Platform is essential and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Mission Platform must be formalised through a Memorandum of Understanding to be concluded as soon as possible after the project starting date.</p>

Expected Outcome: To support the Zero Pollution Action Plan and the Smart and Sustainable Mobility Strategy as well as the implementation of the Climate-Neutral and Smart Cities Mission, project results are expected to contribute to all of the following expected outcomes:

- Real-time demonstration of on-board tamper-proof and remote measurement techniques for a wide range of pollutants (including pollutants from alternative fuels and non-regulated pollutants) from vessel emissions, allowing shipowners to measure the emissions during operation and contributing to the current monitoring and enforcing activities of public authorities, such as port and maritime authorities and with the potential to be used for future compliance monitoring;
- Development of broadly accepted harmonised methods to measure real sailing emissions, including coastal, open seas and inland waterway with potential to be used for future compliance monitoring;

- Development of an automatic reporting and verification system solution that helps shipping companies to comply with current and future regulation and for maritime, inland and port authorities to monitor and control the actual ship emissions derived from the data exchanged;
- Contribution to the delivery of better emission factors for emissions inventories and projections, especially for harmful substances and fuel mixtures for which little knowledge exists today and ultimately contributing to the establishment of a broadly accepted method for measuring and calculating real sailing emissions of a ship;
- Identification of real-world releases of harmful substances which are currently not controlled by regulations and excessive releases of substances already controlled in open seas and in-port activities;
- Innovative technologies and systems to monitor, measure and identify the source of pollution in ports beyond vessels, including other transport modes, port operations and industries active in the port environment are made available for public authorities;
- Recommendations for improved certification and testing to better cover real world situations;
- Support of local, regional, national and international emissions reduction and air quality plans and noise action plans by providing real-world emission information and measuring the actual impact of control measures and strategies on concentrations and/or deposition of pollutants;
- Identification of risk areas for potential violations to emission limits.

Scope: There is a pressing need to measure accurately the different types of emissions in coastal and port environments located near to cities, because of their negative impact on the environment and human health. Ports, as intricate environments showcasing a variety of vessels including novel designs, pose a challenge to the development of standardised technologies capable of collecting and assessing real-time pollutant emissions data from these ships docking at ports. This is vital for enforcing emissions limits and validating the data for enforcement purposes.

Moreover, emissions in ports stem from other sources, such as port operations (e.g., cargo handling, towing, fuel storage, and bunkering) or even other industrial activities (directly or indirectly linked to transport, e.g., fisheries) taking place within the port area. Additionally, ports are frequently situated near industrial zones, making it crucial to possess an accurate and, where possible, real-time understanding of the types, origins, and intensity of pollutant and noise emissions generated in and around a port area.

The shift from heavy fuel oils to alternative fuels in the context of the regulatory framework²²¹ set to achieve the objectives of the Green Deal requires further research actions; recent evidence from research and monitoring projects has shown that new fuels being considered and GHG emission-control technologies used on-board vessels may result in emissions of other harmful pollutants that are not sufficiently controlled. In some cases, unexpected side effects of emission abatement may arise which might require regulatory action²²².

Further to such undesired releases, it is crucial to ensure that vessels comply with regulations in force, in coastal areas, at open sea and in inland waterways. Projects under call LC-MG-1-1-2018 of Horizon 2020 showed that remote measurement of SO_x emissions using stationary or mobile techniques can significantly increase the cost-effectiveness of compliance monitoring. It is important to explore whether remote or on-board techniques can be extended to the monitoring of additional pollutants such as CH₄, NO_x, N₂O, NH₃, UFP, BC, formaldehyde, PM²²³, as well as the Particle Number (PN), NPAHs and to provide internationally harmonised methods and reporting procedures where such measurements can be used within an enhanced compliance monitoring framework in the future. These methods should also have the potential to be used as evidence for law enforcement to enable independent prosecution of violations. Furthermore, there is a need to develop engine testing procedures that better represent operational patterns in order for the emission values from test cycles to accurately represent real emissions.

Limited surveillance measurements at open seas show a different compliance (lower compliance) behaviour for sulphur emissions compared to measurements in coastal regions. Therefore, it is important to identify risk areas for violations and to establish techniques for monitoring in these areas as well. It is of equally great importance to develop harmonised/standardised monitoring methods that could be used as evidence for sanctions in the future.

Assessment of the real-world performance of emission control, in particular for Tier III vessels, is therefore required to make sure that current NO_x regulations achieve and sustain the emission reductions that these regulations are designed for. Further, certification testing should be modified to better address real world conditions. Moreover, potential ammonia slip

²²¹ The IMO's 2023 GHG Strategy targets net-zero greenhouse gas emissions from international shipping by 2050, with interim goals for 2030 and 2040. Measures include the adoption of lower-carbon fuels such as methanol and ammonia. In the EU, initiatives like FuelEU Maritime and ETS inclusion will drive this transition while regulations address harmful emissions like sulphur and nitrogen oxides, with Tier III NO_x limits enforced. Discussions also focus on Black Carbon emissions in the Arctic and health impacts of ultrafine particles.

²²² For example, evidence shows that the introduced Tiers may not be effective in controlling NO_x emissions in real vessel operation, scrubbers may result in the formation of new ultra-fine particles, ammonia combustion potentially leads to the formation of nitrous oxide and ammonia slip, methanol combustion may lead to the production of formaldehyde, LNG may result in the slip of methane, etc. Obviously, any strategy targeting the control of GHG or air pollutants should not result in negative side-effects such as the release of harmful pollutants which are today not covered by regulations.

²²³ CH₄ – methane; NO_x – nitrogen oxides; N₂O – nitrous oxide; UFP – ultra-fine particles; BC – black carbon; PM – particulate matter.

from urea consumption needs to be identified, and N₂O emission levels need to be determined to ensure that GHG reduction efforts are not thwarted.

In addition, no established method for identifying NO_x emissions that exceed existing standards under real sailing operation is currently in place. Based on different remote or on-board measurement techniques, harmonised methods, and reporting procedures to identify exceedances of expected emission levels needs to be designed and put in action, at least for informative reasons – as no enforcement of low NO_x under real operation is currently in place.

With CH₄ being a potent GHG, any uncontrolled releases from LNG powered vessels significantly compromise any lower carbon benefits of the LNG as a fuel. Moreover, although boil-off gas (BOG) should be reliquefied or used on-board, records of BOG release to the atmosphere have been reported. The extent of any remaining current problem needs to be identified and measurements on methane slip from actual vessels need to identify the extent of emissions, considering potential needs for methane emission limits (for the engines as well as for the fuel storage onboard and the bunkering process). The problem with methane slip will also remain with the use of bio-methane as fuel.

New fuels are considered in the effort to decarbonise shipping, with the most prominent being ammonia (NH₃), methanol (MeOH) and hydrogen. There is currently limited evidence on new pollution dimensions induced by such fuels, including ultrafine particles of non-carbonaceous origin, N₂O and NH₃ emissions, NPAH, Formaldehyde PM, NO_x, etc. Measurements on actual marine engines and vessels using such fuels need to provide new evidence in the pool of data forming so that early measures are taken before such new fuels become widespread in actual use, in case such new emissions prove to be at a level that constitute health hazards or environmental risks. Zero carbon fuels like NH₃ and H₂, as well as dual-fuel engines and CO₂ capture onboard require different remote measurement methods, since CO₂ is no longer a stable and dominant reference gas in the exhaust plume. Alternative options in sensing and calculation method need to be introduced.

Demonstration must be undertaken within a real operational environment. In the collection and analysis of remote as well as static sensing data for the monitoring of emissions and air pollutants, the accuracy of the sensors and the quality and verifiability of the data obtained are of particular importance. Potential risks and problems in data collection and sensor technology, in particular as regards the identification of the source of the pollution, should be analysed in detail. A verifiable methodology is also required for processing and interpreting the data in the next step. Issues such as access to data, data storage and associated security aspects (including the assessment of cyber security of interoperable systems) should be fully considered. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR²²⁴.

To address all these highlighted issues, proposals are expected to undertake all the following R&I activities:

²²⁴ Findable, Accessible, Interoperable and Reusable

- Map high emission activities and demonstrate port, coastal, inland and open sea monitoring techniques for at least NO_x, BC, N₂O, UFP, NH₃, CH₄, PM as well as PN and NMVOC (or any other related pollutants), during normal operation of ships which includes dynamic engine loads of all ship types (including port service vessels) and suitable for zero carbon fuels, dual-fuel engines and carbon capture. All the emission measurements should be integrated through static and remote sensing in order to share data;
- Demonstration of the developed measuring technologies in 6 different TEN-T ports, (of which 3 Core and 3 Comprehensive ports, covering at least three sea basins of the Black, Mediterranean, North Sea, N. Atlantic and Baltic Seas). Out of these 6 ports at least one should be classified as a TEN-T inland-waterway only port according to Annex II of the TEN-T Regulation. At least one of the ports should be situated in a city participating in the Cities Mission and activities should feed into the implementation of the Climate City Contract (CCC), with abatement measures and port-city collaborative governance approaches to match or enhance CCC commitments. The selection of ports should be such as to cover a wide range of emission profiles and take into consideration the complexity of emission sources in order to ensure that the outcome is representative and can be replicated to other ports;
- Identify, differentiate and measure in real time at or near possible sources of emissions (e.g., individual vessel, specific port operations, industrial installations within and very close to the port area) under complex (geographical, layout, mixed space uses and other) conditions and variable weather conditions. The calibration of the measurement systems and the reproducibility of the results should be demonstrated;
- Development of a methodology for assessing pollution within the port area including emissions from all transport modes, port operations and industries located in the port area;
- Identify the impact of emissions in ports and nearby cities and propose mitigating measures and plans for municipalities and port authorities, including ports in which municipalities are not directly involved in the management of port authorities and terminals;
- Development of Real-Time Decision Support Systems (RT DSS) for ships, onboard ship operations, ship operators to look into data collected to enable port and maritime authorities to make decisions about rebates;
- Development of harmonised monitoring techniques and an automatic reporting and verification system solution helping shipowners to comply with current and future EU and international regulation as well as public authorities to monitor and control emissions from the data exchanged;
- Harmonise/standardise monitoring techniques and reporting (taking also into consideration the CountEmissions EU rules) with the potential to be used for legal

prosecution; develop recommendations for improved certification and testing for real world situations;

- Increase evidence to feed pool of data for regulated and non-regulated pollutants from vessels;
- Identify pollutants from new fuels used for shipping decarbonisation;
- Develop protocol(s) for the measurement of BC, UFP, and PN from vessels;
- Develop engine testing methods to better mimic real-world emissions and propose a vessel grading system methodology with respect to its emissions comparable to EURO classification of road vehicles.

Proposals should demonstrate how they will engage with authorities and local communities in disseminating results in proportion to their expected impacts. Relevant authorities include the European Commission, the Bonn Agreement, Helcom, the IMO, and national, regional, and local competent authorities etc. while local communities are primarily, but not limited to, major port cities and coastal areas in the EU.

Proposals are encouraged to explore and use the results from previous EU-funded projects such as SCIPPER (Horizon 2020), EMERGE (Horizon 2020) and Green C Ports (CEF), Interreg Clean North Sea Shipping and LIFE CLINSH (CLEan Inland SHipping) as well as develop complementarities with relevant activities funded under the Horizon Europe call on “Advanced transport emissions monitoring networks” (HORIZON-CL5-2023-D5-01-18) and activities developing satellite-based measurements (Cluster 4 Destination 5 (Space) and EUSPA), focusing on remaining gaps not covered by these projects. Duplication of activities should be avoided.

Proposals are encouraged to include and consider the fisheries sectors and fishing vessels, considering their potential intersections with the use of alternative fuels in ports when relevant. Consideration of projects such as HORIZON-MISS-2023-OCEAN-01-05 and PPPA-2024-FISHVESSELDEMO may prove beneficial.

The funded projects should share their experience and good practices with the projects selected under the topic of the EU Ocean & Waters Mission on “Restoring waterfront cities and their ports /maritime infrastructures (HORIZON-MISS-2025-03-OCEAN-05) and links should also be established with the projects funded under topic HORIZON-CL4-SPACE-2025-01-46: Innovative Earth observation services in support of maritime litter detection and ship source pollution policies.

This topic has been co-programmed and is contributing to the implementation of the Zero-Emission Waterborne Transport (ZEWT) partnership and of the Climate Neutral and Smart Cities Mission.

Cross-cutting

Proposals are invited against the following topic(s):

HORIZON-CL5-2025-04-D5-18: Support to the organisation and dissemination of the Transport Research Arena (TRA) conference

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.60 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.60 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²²⁵ .

Expected Outcome: Project's results are expected to contribute to all of the following expected outcomes:

- Successful organisation of the Transport Research Arena conference (TRA) in 2028;
- Successful organisation of two competitions for transport research and innovation awards covering all transport modes and cross-cutting issues;
- Conference proceedings published in recognised scientific journals;
- Higher visibility, political and strategic relevance of the transport sector and of the EU policy in the field;
- Enhanced dissemination, communication and valorisation of transport R&I objectives, perspectives, strategies and results;

²²⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- More effective links and exchanges between research and innovation stakeholders, industry and policy makers, to support the development and deployment of innovative solutions in Europe and Associated Countries;
- Increased attractiveness of transport related studies and reinforce the pursuit of excellence in European transport research and innovation, by giving recognition and visibility to the best achievements;
- Increased visibility, interest and number of applications for the two competitions for transport research and innovation awards.

Scope: The action will prepare and provide support to the Transport Research Arena (TRA) conference to be organised in 2028 gathering transport stakeholders for discussing political, industrial and research issues on a European and global level.

Proposals are expected to demonstrate the financial and organisational support of the national authorities interested to host the event and an economic plan covering the additional funding needs. A professional conference organiser should be included in the consortium. To ensure high political and strategic relevance, the proposals should involve Member States holding the Presidency of the European Union in year 2028.

In line with previous TRA biannual conferences, the event should address the technological and industrial developments of the transport sector (i.e., road, rail, waterborne, aviation sectors and cross-modal aspects) providing a high level, future-oriented perspective coming from politics, the industry and the research community, in response to Europe's social needs and expectations. Specific attention should be put on a broad and balanced participation in the conference i.e., students, young researchers, women, a large number of country representatives, etc.

The action will be implemented in close collaboration with the Management and Programme Committees of the TRA, which includes the TRA 2028 conference organiser, the European Commission services, the different European Technology Platforms (ERTRAC for road, ERRAC for rail, WATERBORNE TP for waterborne, ALICE for logistics and ACARE for aeronautics and ECTP for construction), the Conference of European Directors of Roads (CEDR), the European Transport Research Alliance (ETRA) and the previous TRA conference organiser (TRA 2026) in order to maintain continuity of the event.

Proposals should address all the following aspects:

- Support the definition of the overall planning of the conference, including the main thematic pillars of the event as well as the structuring of the technical and political sessions;
- Contribute to the identification and selection of an appropriate conference venue and support the organisation of the conference's logistics;

- Provide operational support to the TRA conference organisers, such as in relation to the website and conference management IT tools (e.g., for the registration of participants, handling of speakers' contributions, submission and selection of scientific papers, conference application);
- Support the organisation of the demonstration activities and technical visits;
- Assess and monitor the environmental impact of the event and propose appropriate measures to reduce and mitigate this impact;
- Organise of two high-quality competitions for transport research and innovation awards (TRA VISION) covering all transport modes and cross-cutting issues (technological, socio-economic, and behavioural aspects) in line with the EU policy objectives for climate-neutral and environmentally friendly mobility:
 - o A competition for students and young researchers with the goal of stimulating the interest among young researchers/students to develop innovative solutions in the field of transport;
 - o A competition for senior researchers in the field of innovative transport concepts based on results from EU-funded projects only.
- Proposals should plan for involving the awarded researchers in the conference programme and for promoting links between the researchers and possible career development opportunities in the field (e.g., traineeships, jobs, courses, training);
 - o A very good media coverage before, during and after the event should be foreseen for both the TRA conference and for the TRA VISIONS.

HORIZON-CL5-2025-04-D5-19: Knowledge sharing and dissemination to support road transport R&I in EU and around the world increasing global EU competitiveness

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the

	Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²²⁶ .
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Expected Outcome: Project's results are expected to contribute to all of the following expected outcomes:

- Increased participation of actors and stakeholders to EU activities in the area of road transport, also supporting a more coherent and inclusive European alignment in specific identified areas;
- Identified state of the art, requirements and developments, future needs and barriers to foster the deployment of EU R&I results and proposals for action to support the future of the European road transport area R&I, also including skills and standards;
- Identified possible renewed strategy for research infrastructure ecosystems in the Road Transport sector;
- Increased international cooperation on road transport with related national and international organisations and support of international EU activities in line with the UN Sustainable Development Goals and supporting the competitiveness of the EU industry, in particular the US and the Global South;
- Widespread dissemination of contribution from road transport research, in particular from EU funded projects, focused on the realisation of the European Green Deal, the new European industrial policy, the European Union digital strategy as well as Vision Zero for road safety;
- Knowledge sharing and widely promoted R&I activities, in particular via road transport events to support identification of future requirements, potential developments, white spots and precompetitive activities.

Scope: The objective of this topic is to further promote Research and Innovation (R&I) leading to sustainable road transport in Europe and at an international level. The action is expected to help identify future R&I needs, gather an increased number of innovative actors and stakeholders, stimulate a wider participation to EU activities and support European plus Worldwide dissemination of results and support the identification of possible future actions in view of a renewed European competitiveness. This action shall provide a positive contribution to the European Research Area, as well as to the European strategies for future transport systems and the EU's collaboration in R&I with international partners. In addition, this

²²⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

initiative will support climate action and air quality improvement in line with the Green Deals targets and objectives, Vision Zero for road safety, contribute to the United Nations (UN) Sustainable Development Goals as well as the EU's digital strategy.

In line with these objectives, all the following aspects will need to be addressed:

- Widen and increase the European future road transport R&I environment by providing an enlarged, more innovative and more representative number of interested stakeholders that could currently be less represented in existing European platforms, networks and associations (both geographically and thematically);
- Identification of actions to support the road transport R&I area, e.g. identify state of the art, future and innovative requirements, potential technical developments and white spots, and potential precompetitive activities;
- Identification of in-depth state of the art and barriers for the deployment of EU research results at European and international level, co-development of options to overcome them, including development of innovation plans and analysis of competitiveness issues to support the alignment of European stakeholders in the following specific areas: “Urban zero-emission mobility”, “Improved air quality”, “Future road safety”, “Zero-emission long-haul logistics” and “Digitalisation of road transport” (including all relevant aspects related to Artificial Intelligence, big data and Software Defined Vehicles);
- Assess the current road transport related research infrastructures (RI) in Europe and, based on this, analyse and identify needs towards a strategy for the establishment of a research infrastructure (RI) ecosystems in the Road Transport sector that addresses EU priorities and strategic autonomy together with the EU's capacity for excellent research;
- To foster innovation aspects of road transport R&I, at least 4 specific events or workshops will be organised to present, discuss and disseminate the analysed technology needs, trends and results of the above points. In addition, direct support (such as financial, organisational, communication and dissemination) is expected to the annual Road Transport Research Conferences co-organised by the European Commission, ERTRAC, and the 2Zero, CCAM and BATT4EU Partnerships;
- Support the identification and scaling up of activities at an EU level in the fields of education, training and skilling/reskilling and standardisation;
- In the field of international cooperation in line with the UN SDGs and to support the European industrial competitiveness for the future road transport sector:
 - o Following-up the previous EU-US transport research symposia (co-organised by the European Commission) in the specific sectors of “Decarbonisation” and “Digitalisation”, provide a deep analysis of the implementation and evaluation of EU research funded projects and activities to support the alignment with the US

(mainly under the DoE and DoT programmes) on technological, societal, systemic and spatial dimensions of R&I in road transport.

- o Analyse EU research funded projects and activities related to electromobility in urban areas in emerging economies (specifically in Africa, Asia and Latin America) and support further dissemination and replication of implemented solutions in other regions via specific workshops and events, mainly online. This shall also facilitate the exchange of information of EU actors and projects with key international cooperation programmes such as the Global Gateway and the UN Global Environment Facility (GEF).

DRAFT

Safe, Resilient Transport and Smart Mobility services for passengers and goods

This Destination includes activities addressing safe and smart mobility services for passengers and goods.

This Destination contributes directly to the Strategic Plan's **Key Strategic Orientations** 'Green transition', 'Digital transition' and 'A more resilient, competitive, inclusive and democratic Europe'.

In line with the Strategic Plan, the overall **expected impact** of this Destination is to contribute to the 'Multimodal systems and services for climate-neutral, smart and safe mobility'.

The main impacts to be generated by topics under this Destination are:

Connected, Cooperative and Automated Mobility (CCAM)

1. Safe, inclusive, affordable, attractive and accessible door-to-door (incl. shared) mobility for people and goods, including freight services and last-mile deliveries, in all weather conditions, seamlessly integrated with various transportation modes to ensure interoperability and full integration of CCAM solutions into the existing transport ecosystem;
2. Resilient, climate neutral, and sustainable mobility solutions with a reduced carbon footprint leading to greener, less congested, cost-effective and more demand-responsive transport everywhere;
3. Smart mobility services based on user-centric and explainable technologies and services, including digital technologies, advanced satellite navigation services, and smart traffic management (AI enabled when appropriate), considering the diverse needs and behaviours of categories of end-users;
4. Improvement of road safety thanks to the progressive transition of road traffic towards automation and Advanced Driver Assistance Systems (ADAS).

Multimodal and sustainable transport systems for passengers and goods

1. Advanced knowledge base and solutions for climate neutral and resilient infrastructure;
2. More efficient, sustainable, safe and competitive infrastructure construction, maintenance, inspection and monitoring in a "whole life cycle" approach;
3. Existing and new transport infrastructure is designed/adapted to support deployment of new technologies and fuels in view of improving its performance, user experience and safety, support seamless and efficient multimodality and limit transport related emissions;
4. Reduced emissions and increased efficiency and competitiveness of long-haul and regional freight transport and logistics, including the supply chain optimisation.

Safety and resilience

1. Drastic reduction in serious injuries and fatalities in road crashes involving cyclists, pedestrians and users of micro-mobility devices;
2. Predictive framework is established using AI and big data for transport safety;
3. Optimised Human-technology interaction that minimises confusion, distraction and thus collision risks;
4. Enhanced aviation safety under adverse weather conditions.

Connected, Cooperative and Automated Mobility (CCAM)

Proposals are invited against the following topic(s):

HORIZON-CL5-2025-04-D6-01: Advancing remote operations to enable the sustainable and smart mobility of people and goods based on operational and societal needs (CCAM Partnership) – Societal Readiness Pilot

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training

	Programme of the European Atomic Energy Community (2021-2025). ²²⁷ .
<i>Exceptional page limits to proposals/applications</i>	The page limit of the application is extended by two pages to 52 to properly address Societal Readiness-related issues.

Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- Comprehensive set of principles, guidelines and requirements for remote operations that clarify operational complexities (e.g., safety, (cyber-)security, liability, privacy, certification and operator training, interoperability, cross-border operations) is defined, and a standardised approach to extend the Operational Design Domain (ODD) of CCAM solutions is established;
- Infrastructure prerequisites, particularly in technology and communications (safe and reliable communication, especially considering SNS components for the automotive sector²²⁸) are defined, which are critical for the successful implementation of remote operation capabilities, outlining the technical standards and investments necessary for seamless integration with current transport systems, while appreciating the potential environmental impact;
- Safety validation methodologies extended to remote operations favouring acceptance and trust of road users in such CCAM systems;
- Identification and description of at least two economically viable business cases for remote operations complementing the ODD of CCAM solutions, analysing the economic costs and benefits, market potential, and scalability factors, and providing a clear value proposition for public or private stakeholders for each use case;
- Understanding the human factors of the entire system (including the in-vehicle and remote perspective), as well as legal requirements and working conditions for remote operators, addressing cognitive load, fatigue and stress, ergonomic considerations, and the identification of essential skills. Establishment of key conditions for job quality, safety, up-to-date competences and acceptance of working conditions in diverse cultural contexts;
- Responsiveness to a deeper understanding of the needs and concerns of diverse social groups involved in or potentially affected by the R&I development, considering gender and other social categories, and thereby increasing the potential for beneficial societal uptake, and building trust in results and outcomes;

²²⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²²⁸ See SNS calls for further linkage.

- Policy and governance recommendations in view of establishing new or updating existing legislation to cover remote operations, e.g., through clear descriptions of stakeholder roles and responsibilities that may vary for different types of remote operations.

Scope: This topic aims at exploring the operational and societal conditions and prerequisites for complementing the ODD of CCAM solutions through remote operations, as defined by the United Nations Economic Commission for Europe (UNECE)²²⁹. Here “remote operations” is to be understood as the remote monitoring, assisting, and operating the Automated Driving System (ADS) by a person located externally. The vehicle operates with a high degree of automation (SAE Level 4), but a human operator can monitor its actions and surroundings remotely and intervene, if needed. Intervention ranges from providing strategic guidance and tactical commands to determining vehicle manoeuvres and taking over control in scenarios that include, but are not limited to, emergency responses, system malfunctions, ADS system limits, or complex navigational challenges unforeseen by the CCAM system.

The topic invites proposals to explore two use cases that should focus on remote operations on urban and rural public roads and/ or confined areas, dealing with at least two of the following areas:

- Transport of people: use cases that enhance public transport services (i.e., by fleets of remotely operated shared vehicles, including, if relevant, on-demand responsive transport) improving accessibility and mobility for users in all their diversity in terms of all characteristics (e.g., age, gender, disability, etc);
- Transport of goods: use cases that optimise logistics (e.g., remotely operated delivery vehicles in urban environment), improving efficiency and sustainability;
- Combination of people and goods transport: use cases of integrated solutions (e.g., remotely operated vehicles that transport goods during off-peak hours and convert into passenger transport services during peak times), improving vehicle utilisation, while addressing congestion and reducing environmental impact.

For each of these use-cases, operational and societal aspects that would enable remote operations of multiple ADSs must be evaluated in terms of business models, infrastructure needs, safety assurance, legislation, as well as organisational aspects that may include cultural elements. Additionally, operator’s skills, performance and situational awareness of the remote operator must be addressed. The analysis of potential rebound effects and questions related to energy sufficiency and sustainability should not be neglected. Where applicable, the use of generative AI should be considered.

This topic aims to understand all the different components of the complex ‘system-of-systems’, combining technological advancements with a focus on human-centred design/ interfaces, as well as societal needs, considering their implications from the start. This will enable to lay the foundation for the development of advanced demonstrator use cases,

²²⁹ https://unece.org/sites/default/files/2023-03/Informal%20document%20No16e_0.pdf

integrating the various components in next phases, although technological adaptations of existing approaches to reach an integrated system-of-systems should already be validated in the relevant environment here.

Technological components of the system-of-system are foreseen to include e.g. infrastructure support, communications, cyber-security, key enabling technologies (possibly including generative AI, etc.). Proper selection of existing technology enablers and related SW developments to implement the remote operation functions is essential. Societal aspects must be identified (e.g., user-centric design, working conditions), through the inclusive engagement of stakeholders for problem formulation and concepts development, co-creation and co-assessment of deployment and operations.

Stakeholders could include user groups and public advocacy organisations, mobility companies, technology providers, public agencies, planners, community groups, industry associations, first responders, social partners²³⁰ and workforce representatives. These should be involved in building awareness, trust, and support for remote operations, identifying skill gaps and skill transferability of operators as well as training needs. Additionally, various stakeholders should be engaged to examine unanticipated implications (e.g., environmental, social equity etc.) and to co-develop solutions, as well as other pre-conditions making remote operations feasible (e.g., policy, governance, territorial planning, infrastructural readiness, integration into Traffic Management Systems (TMS), organisational and legislative requirements etc.).

The dimensions of Responsible Research and Innovation (RRI) – reflection, inclusion, anticipation, and responsiveness – should guide the exploration of the technological components of the system-of-system to achieve societal readiness, involving relevant Social Sciences and Humanities (SSH) disciplines (e.g., psychology, geography, Science and Technology Studies, sociology, ethics).

The safety assurance of remote operations entails the development of a corresponding validation methodology, as the remote operator with the wireless communication system and the related interfaces becomes part of the system to be validated. Proposed actions shall develop the basic principles of such a methodology considering the framework provided by EU 2022/1426, building upon, to the extent possible, the results of the SUNRISE²³¹ project and seeking close coordination with actions under HORIZON-CL5-2023-D6-01-02²³², HORIZON-CL5-2024-D6-01-02²³³ as well as HORIZON-CL5-2024-D6-01-03²³⁴.

This topic is a Societal-Readiness pilot:

²³⁰ As per the legal basis of Art. 154 of the TFEU.

²³¹ [Safety assurance framework for connected and automated mobility system](#), grant agreement ID: 101069573.

²³² Generation of scenarios for development, training, virtual testing, and validation of CCAM systems.

²³³ Scenario-based safety assurance of CCAM and related HMI in a dynamically evolving transport system.

²³⁴ Orchestration of heterogeneous actors in mixed traffic within the CCAM ecosystem.

- Proposals should follow the instructions applying to the Societal readiness pilot, as described in the introduction of the Horizon Europe Main Work Programme 2025 for Climate, Energy and Mobility. They entail the use of an interdisciplinary approach to deepening consideration and responsiveness of research and innovation activities to societal needs and concerns.
- This topic requires effective contribution of the relevant SSH expertise, including the involvement of SSH experts in the consortium, to meaningfully support Societal Readiness. Specifically, SSH expertise is expected to facilitate the socio-technological interface and enable the design of project objectives with Societal Readiness related activities.

This topic implements the co-programmed European Partnership on ‘Connected, Cooperative and Automated Mobility’ (CCAM). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Connected, Cooperative and Automated Mobility’ (CCAM) in support of the monitoring of its KPIs.

Projects resulting from this topic are expected to apply the European Common Evaluation Methodology (EU-CEM) for CCAM²³⁵.

HORIZON-CL5-2025-04-D6-02: Preparing for large-scale CCAM demonstrations (CCAM Partnership) – Societal Readiness Pilot

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training</p>

²³⁵ See the evaluation methodology [here](#).

	Programme of the European Atomic Energy Community (2021-2025). ²³⁶ .
<i>Exceptional page limits to proposals/applications</i>	The page limit of the application is extended by two pages to 35 to properly address Societal Readiness-related issues.

Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- Pave the road for forthcoming CCAM deployment and deliver a comprehensive large-scale demonstration plan for CCAM vehicles across Europe;
- Ensure the engagement of key stakeholders across the value chain in transport and mobility, including required industrial partners (such as OEMs and suppliers) and a range of end users and service providers, in preparing for demonstrations that will pave the way for subsequent implementations;
- Establish the foundation for future use case specific projects in different domains, such as public and private road transport and logistics, alongside the large-scale demonstrations;
- Outline a CCAM promotion strategy, supporting elevated public engagement and awareness;
- Responsiveness to a deeper understanding of the needs and concerns of diverse social groups involved in or potentially affected by the R&I development, thereby increasing the potential for beneficial societal uptake, and building trust in results and outcomes.

Scope: In recent years, the work in vehicle automation has concentrated on technological advancements, human factors, extensive testing, and demonstrations to raise public awareness and facilitate market readiness. Even with the progress achieved, the challenges related to technical functionality as well as use, demand and affordability remain considerable.

To tackle these challenges, a sensible approach is needed to implement vehicle automation developments in real-life applications via large-scale demonstrations such as Field Operational Tests (FOTs) within Living Labs. Additionally, particular use cases for public road transport and logistics should be targeted. The validation of technical enablers (also considering technological readiness), understanding user behaviour, promoting acceptance and advancing societal readiness for both mobility of people and transport of goods remains a major focus. The tests and large-scale demonstrations should be conducted in both mixed traffic conditions and confined areas, where applicable. Ensuring interoperability of connected automated systems across various vehicle brands, regions, and Member States is essential.

²³⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Since successful large-scale demonstration activities require strong and early engagement from key stakeholders, comprehensive planning and preparatory actions, leveraging previous and ongoing efforts, are needed to ensure European competitiveness and leadership.

The action should leverage previous and ongoing projects at European and national levels on demonstration activities. It should consider the outcomes of the European software-defined vehicle of the future initiative. The frameworks and guidelines formulated by the CCAM Partnership shall be duly reflected²³⁷. This is to optimise the return on investments and create a strong basis for future large-scale demonstration projects to boost an industry-wide European deployment strategy for CCAM.

Proposed actions for this topic are expected to address all of the following aspects:

- Define the prerequisites for performing large-scale demonstration projects, considering vehicle technology maturity and other technical enablers, physical and digital infrastructures, as well as approval frameworks for public road testing;
- Prepare and refine methodologies, test procedures and tools for the execution of field tests and efficient data management;
- Identify test and demonstration sites across Europe for CCAM functions, considering the extension of Operational Design Domains (ODDs), using vehicular communication technologies (V2X) that enables Traffic Management Systems (TMS) for improved traffic flow and operational efficiency;
- Initiate a cross-sector stakeholder forum for the definition of use case relevant projects in different domains and their implementation.

The proposed action is expected to foster the collaboration between public and private stakeholders to achieve common objectives and assess societal impacts. Engagement of key stakeholders, covering the whole CCAM ecosystem, such as mobility and transport users, , public transport, shared mobility and logistics operators, infrastructure providers, traffic managers, public authorities, and research institutions must be ensured. In addition, European industrial players such as OEMs and suppliers should be adequately represented.

This topic is a Societal-Readiness pilot:

- Proposals should follow the instructions applying to the Societal readiness pilot, as described in the introduction of the Horizon Europe Main Work Programme 2025 for Climate, Energy and Mobility. They entail the use of an interdisciplinary approach to deepening consideration and responsiveness of research and innovation activities to societal needs and concerns.
- This topic requires effective contribution of the relevant SSH expertise, including the involvement of SSH experts in the consortium, to meaningfully support Societal

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<https://www.ccam.eu/>
<https://www.connectedautomateddriving.eu/>

Readiness. Specifically, SSH expertise is expected to facilitate the socio-technological interface and enable the design of project objectives with Societal Readiness related activities.

This topic implements the co-programmed European Partnership on ‘Connected, Cooperative and Automated Mobility’ (CCAM). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Connected, Cooperative and Automated Mobility’ (CCAM) in support of the monitoring of its KPIs.

The project should build upon the results of the FAME²³⁸ project and on the actions under HORIZON-CL5-2024-D6-01-05²³⁹ to ensure complementarity between activities.

Projects resulting from this topic are expected to apply the European Common Evaluation Methodology (EU-CEM) for CCAM²⁴⁰.

HORIZON-CL5-2026-01-D6-03: Next-generation environment perception for real world CCAM operations: Error-free and secure technologies to improve energy-efficiency, cost-effectiveness, and circularity (CCAM Partnership)

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the

²³⁸ Framework for coordination of Automated Mobility in Europe, grant agreement ID: [101069898](#).

²³⁹ Robust Knowledge and Know-How transfer for Key – Deployment Pathways and implementation of the EU-CEM.

²⁴⁰ See the evaluation methodology [here](#).

<i>Agreements</i>	Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁴¹ .
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Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- Availability of validated prototypes of next-generation vehicle and infrastructure-based environment perception technologies for robust, reliable and trustworthy CCAM operations to anticipate and avoid foreseeable risks and unexpected safety-critical situations in complex real-world conditions (e.g., at pedestrian crossings, in construction sites, during interactions with emergency vehicles, etc.);
- Understanding the degree (and limits) to which automated CCAM perception systems can anticipate, process, and respond to on-site ‘early-warnings’ (e.g., street design, sounds, smells and other signals from the environment, weather conditions, intentions of pedestrians, cyclists, and other active mobility users, etc.);
- Improvement of the energy-efficiency of the sense-think-act systems of CCAM considering the vehicle, the infrastructure, the cloud at-the-edge, while at the same time increasing the performance to guarantee security and error-free reliability; these developments will contribute to the reduction of the potential climate and environmental footprints of CCAM systems;
- Standardisation and adoption of modular, reusable, and upgradable software and hardware platforms, investigating scalable deployment concepts that lead to cost reduction and improved affordability while adopting a circular, eco-design approach (including efficient materials use, reduced waste, and the repair and reuse of components where feasible).

Scope: The initial deployment of Level 4 automated vehicle services in urban and other complex settings has encountered significant challenges in environmental perception and decision-making, leading to occasional remote assistance calls, blockages and accidents that have impacted public trust. At the same time, the increasing computing power demand is in conflict with a limited usage of energy and resources to meet sustainability requirements. Thus, emerging large-scale demonstrations of automated vehicles should be accompanied by objective-oriented research aimed at addressing these challenges directly, while targeting improvements in performance, accuracy, reliability, and cyber-security.

To successfully overcome these challenges, proposed actions for this topic are expected to address all of the following aspects:

²⁴¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Advancements in all steps of the sense-control-act process for both vehicle- and infrastructure-based smart sensor systems and networks, controllers, and actuators to ensure safety and trustworthiness of CCAM, as well as facilitating effective disruption management;
- Utilisation of digital enabling technologies including, for example: AI at-the-edge, machine learning, data spaces with reference scenarios and suitable software architectures²⁴²;
- Adoption of modular, reusable, and open software platforms supporting the environment perception for CCAM while ensuring transparency of operation, verification, and safety assessment to build trust, with respect to authorities, decision makers and the public via direct performance explainability;
- Energy efficiency, circularity, and eco-design of the environment perception systems by decreasing potential energy and resource consumption in both production and operation as well as facilitating reusability, reparability and upgradability while further enhancing the performance;
- Reduction of potential costs of environment perception systems through scalability, modularity and standardisation, making technologies financially viable for widespread implementation;
- Support remote assistance as a stepping-stone towards higher levels of autonomy and vehicle automation in wider Operational Design Domains (ODD).

Solutions are expected to integrate electronic hardware architectures and software stacks in a co-design approach. Hence, it is strongly encouraged that solutions use, as far as possible, building blocks and tools from projects of the Software-Defined Vehicle of the Future (SDVoF) initiative under the Chips Joint Undertaking, e.g., on the hardware abstraction layer and SDV middleware and API framework. Results from projects funded under HORIZON-CL5-2024-D6-01-04²⁴³ and complementarities with projects funded under Horizon Europe Cluster 4 “Digital Industry and Space” should also be considered, where appropriate.

As the activities should demonstrate feasibility and their full potential for real-world applications, proposals should foresee exchanges with other relevant EU or national projects for e.g., coordinated validation, transport systems integration and large-scale piloting. Collaboration should also be sought with projects funded under HORIZON-CL5-2024-D6-01-01²⁴⁴ and other directly relevant call topics.

In view of the relevance of environment perception and decision-making of automated vehicles for the responsiveness of the innovation to diverse societal interests and concerns,

²⁴² In line with the European Artificial Intelligence strategy and requirements for trustworthy, explainable, and safe AI.

²⁴³ AI for advanced and collective perception and decision making for CCAM applications

²⁴⁴ Centralised, reliable, cyber-secure & upgradable in-vehicle electronic control architectures for CCAM connected to the cloud-edge continuum.

accessibility, inclusiveness as well as regulation, proposals should consider societal, ethical, socio-economical and/ or legal aspects as far as feasible in the requirements of the technical solutions to be developed. This could involve the engagement of institutional users as well as citizen-science approaches, e.g., in collaboration with projects CulturalRoad²⁴⁵ and Diversify – CCAM²⁴⁶.

To achieve the expected outcomes, international cooperation is highly relevant, considering the lessons learned in this area (for example, from robo-taxi and freight transport trials in the US and China). Activities should foster links between the European ecosystem and relevant stakeholders around the world, in particular with Japan and the United States but also with other relevant strategic partners in third countries, while taking into account the legal, cultural, historical, and social aspects in Europe as well as other specificities of the European road network and cities (including: traffic rules, user behaviour, diverse user groups considering gender, age, disability, socio-economic status, streets morphology, and the structure and condition of roads in rural areas).

This topic implements the co-programmed European Partnership on ‘Connected, Cooperative and Automated Mobility’ (CCAM). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Connected, Cooperative and Automated Mobility’ (CCAM) in support of the monitoring of its KPIs.

Projects resulting from this topic are expected to apply the European Common Evaluation Methodology (EU-CEM) for CCAM²⁴⁷.

HORIZON-CL5-2026-01-D6-04: Integration of human driving behaviour in the validation of CCAM systems (CCAM Partnership)

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection

²⁴⁵ Cocreate, Embrace – grant agreement ID: [101147397](#).

²⁴⁶ Diversify CCAM by integrating European cultural and regional variations in the design and implementation of citizen-friendly systems to foster mobility equity - grant agreement id: [101147484](#).

²⁴⁷ See the evaluation methodology [here](#).

	of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁴⁸.</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Validated human behavioural models representing the variety of human driving behaviour in safety-relevant scenarios, shared through a common repository and to be used:
 - o to define pass criteria/ assessment criteria for CCAM systems in type approval schemes, consumer testing campaigns and industrial development processes;
 - o to design safe, human-like behaviour of CCAM systems that can be anticipated easily by all road users and is acceptable to both CCAM vehicle occupants and all road users.
- Application of such human behavioural models in the virtual safety validation of CCAM systems to realistically represent the behaviour of human-driven vehicles in closed loop simulations of mixed traffic, thereby reflecting the variety of human driving behaviour, including behaviour in complex real-world and emergency conditions.

Scope: The deployment of CCAM systems in mixed traffic will mean intense interaction with all road users such as the human drivers of other vehicles as well as pedestrians and riders of two-wheelers. These interactions (including implicit and explicit communication by humans and CCAM systems) will play a crucial role in the acceptance and thereby the penetration of CCAM systems in future road transport. CCAM systems will have to show safe and human-like driving behaviour, so that their decisions and actions can be anticipated easily by all road users, respecting the variety of typical driving behaviour across different countries as well as the need for CCAM systems to respect traffic rules and support road safety.

²⁴⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

This will require validated models of explicit and implicit human driving behaviour to design and validate such system behaviour. These models will be needed in closed loop simulations of CCAM systems in mixed traffic to realistically represent the reactions of human drivers in other vehicles to the behaviour of a CCAM system. Models representing human driving behaviour are being developed by the projects i4Driving²⁴⁹ and BERTHA²⁵⁰ for selected fields of application, i.e. they will be calibrated for a limited number of scenarios. Bringing together and building upon the results of these projects – in particular a simulation library and an innovative methodology to account for uncertainty from i4Driving and a scalable, probabilistic driver behavioural model from BERTHA, research is needed to extend the fields of application that these projects are addressing with a focus on representing driver behaviour in a multitude of safety-critical scenarios, considering the variation and statistical distribution of human behavioural patterns and the factors influencing such behaviour, including the parallel execution of non-driving related tasks.

To achieve high degrees of robustness and applicability in a wide range of scenarios, detailed calibration and parameterisation is necessary, as driver behaviour depends on factors such as the road infrastructure, vehicle types, traffic conditions and rules, as well as regional influences and driver experiences / demographics, e.g., gender, age and other relevant social variables. Considering the deviation of average from ideal human driving behaviour, proposed actions must also validate the models for their extended fields of application, going well beyond the applications and degrees of validation accomplished by the above-mentioned projects under HORIZON-CL5-2022-D6-01-03. Proposed actions are thus expected to raise the technology readiness of such models to TRL 5. Data for parameterisation and validation should be captured by monitoring real human drivers in driving simulators and/or real traffic considering what is happening inside and outside the vehicle.

Proposed actions should integrate, to the extent possible, the validated models in the virtual validation and verification approaches as developed in the projects HEADSTART²⁵¹ and SUNRISE²⁵² and complemented by the project SYNERGIES²⁵³. Successful integration should be demonstrated in various safety-relevant scenarios as provided by the action(s) funded under HORIZON-CL5-2023-D6-01-02²⁵⁴. Models should be shared via the federated data exchange platform for CCAM to be developed by an action under HORIZON-CL5-2025-D6-06²⁵⁵.

Proposals are encouraged to also explore additional fields of application of validated driver behaviour models, while the integration of relevant expertise from social sciences and humanities (SSH) is expected.

²⁴⁹ Integrated 4D driver modelling under uncertainty, grant agreement ID: [101076165](#).

²⁵⁰ BEhavioural ReplicaTION of Human drivers for CCAM, grant agreement ID: [101076360](#).

²⁵¹ Harmonised European solutions for testing automated road transport, grant agreement id: [824309](#).

²⁵² Safety asUraNce fRamework for connected, automated mobility SystEms, grant agreement ID: [101069573](#).

²⁵³ Real and synthetic scenarios generated for the development, training, virtual testing and validation of CCAM systems, grant agreement ID: [101146542](#).

²⁵⁴ Generation of scenarios for development, training, virtual testing and validation of CCAM systems

²⁵⁵ Federated CCAM data exchange platform (see below).

To achieve the expected outcomes, international cooperation is encouraged with research stakeholders in Japan and the United States but also with other relevant strategic partners in third countries. Such cooperation should exploit synergies as far as possible in capturing data for the parametrisation and validation of behavioural models, while considering regional and cultural differences as well as specificities of respective road infrastructures.

This topic implements the co-programmed European Partnership on ‘Connected, Cooperative and Automated Mobility’ (CCAM). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Connected, Cooperative and Automated Mobility’ (CCAM) in support of the monitoring of its KPIs.

Projects resulting from this topic are expected to apply the European Common Evaluation Methodology (EU-CEM) for CCAM²⁵⁶.

Projects funded under this topic are encouraged to explore potential complementarities with the activities of the European Commission's Joint Research Centre's Sustainable, Smart, and Safe Mobility Unit and, where appropriate, establish formal collaboration.

HORIZON-CL5-2026-01-D6-05: Approaches, verification and training for Edge-AI building blocks for CCAM Systems (CCAM Partnership)

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the

²⁵⁶ See the evaluation methodology [here](#).

<i>Agreements</i>	Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁵⁷ .
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- CCAM solutions - in hardware and software - with reduced power consumption, latency, and improved speed and accuracy, as domain specific adaptations of sector agnostic advancements in e.g. AI and/or cloud-edge-IoT technologies;
- Enhanced levels of safety, (cyber) security, privacy and ethical standards of data-driven CCAM functionalities by using e.g. edge-AI applications for CCAM;
- Approaches for well-balanced distributions of AI calculations for expanding use cases (e.g. collective perception, decision making and actuation) for connected, cooperative and automated driving applications (using a balanced mix of edge-based solutions, cloud-enabled solutions and vehicle-central solutions), balancing speed and latency, energy use, costs, data sharing and storage needs and availability;
- Validated approaches incorporating edge-AI solutions into the action chain from perception and decision-making up to actuation of advanced CCAM functionalities - both on-board and on the infrastructure side - for systemic applications such as traffic management and remote control, as well as tools and approaches for training of such functionalities, which require optimised and verified edge-AI models.

Scope: CCAM-enabled vehicles are constantly sensing their surroundings on road conditions, location, nearby vehicles and infrastructure. Such data is shared in real-time, while data from other sources is received. This needs powerful and optimised large data processing algorithms, which requires large amounts of computing power, data processing, real-time operation and high levels of security. However, most existing AI computing tasks for automated vehicle applications are relying on general-purpose hardware, which has limitations in terms of power consumption, speed, accuracy, scalability, memory footprint, size and cost. Hardware advancements driven by initiatives such as the Chips JU calls must be complemented by significant efforts to optimise AI algorithms for CCAM functionalities, ensuring their efficient performance on edge-specific hardware.

To encompass CCAM solutions in future steps towards e.g., the Software Defined Vehicle, this dual approach on AI advancements and hardware advancements is essential. Complementarities with projects funded under Cluster 4 “Digital Industry and Space” of

²⁵⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Horizon Europe should also be considered where appropriate, especially in translating sector-agnostic innovations to the specificities of CCAM applications. Requirements on AI algorithm optimisation, latency, on-board energy availability, solutions to gain unbiased datasets for AI training, Electronic Control Unit (ECU) capacity and on potential safety-critical scenarios should be considered to ensure the timely triggering of actions, and in a later stage, anticipatory driving. Solutions should use, as far as possible, building blocks, interfaces, and tools from projects of the Software-Defined Vehicle of the Future (SDVoF) initiative.

Edge-AI involves deploying AI algorithms on edge computing devices, which are hardware systems constrained in proximity to the data source where they operate. This is done without relying on remote resources for the computational efforts. It thus facilitates real-time insights, responses and triggering of actions, with reduced costs as the processing power close to the application is used, greatly reducing networking costs. Combining AI with edge-AI can facilitate stable solutions to include the full activity chain from sensing, perception, decision-making up to actuation of advanced CCAM solutions, gaining speed and resilience which are essential in safety-critical situations.

To successfully overcome these challenges, proposed actions are expected to address all of the following aspects:

- For next major advancements in AI applications in CCAM solutions, huge AI applications need to fit into limited hardware, to make it fit for purpose. Edge-AI devices often have limited computational resources, making it challenging to deploy large and complex AI models. Thus, it is essential to develop and reshape approaches and building blocks for CCAM solutions, viable to be run on edge-hardware. Use cases for the approaches and building blocks should focus on time-critical applications (such as the chain from (collective) perception, decision making and actuation of functionalities) and can be linked to the activities and results from projects AI4CCAM²⁵⁸ and AIthena²⁵⁹.
- Develop optimised edge-AI algorithms and demonstrate their applicability and scalability, using real-world CCAM scenarios such as in the databases resulting from projects such as SYNERGIES²⁶⁰. The development and demonstration use case should include in-vehicle perception and understanding, such as object detection, segmentation, road surface tracking, sign and signal recognition, etc. Decision making and actuation of countermeasures is to be part of the chain of actions. The approaches for these building blocks and enabling technologies should facilitate a quick uptake in adjacent or following projects;
- Optimisation of the models for edge deployment. This involves adjusting the size and complexity of models to allow it to run on the relevant edge devices and include training and verification approaches. Techniques such as model quantization, pruning, and

²⁵⁸ Trustworthy AI for CCAM, grant agreement ID: [101076911](#).

²⁵⁹ AI-based CCAM: Trustworthy, Explainable, and Accountable, grant agreement ID: [101076754](#).

²⁶⁰ Real and synthetic scenarios generated for the development, training, virtual testing and validation of CCAM systems, grant agreement ID: [101146542](#).

knowledge distillation can be used to reduce the size of AI models without significant loss in performance. Additionally, over-the-air (OTA) updates can be used to manage and update models across a fleet of devices efficiently;

- Develop tools and approaches for edge-AI model monitoring, to ensure that edge-AI systems continue to operate as expected and ensure resilience to failure conditions or attacks, and monitoring model outputs to ensure they are accurate even as real-life conditions and datasets change.

The research will require due consideration of cyber security, connectivity and both personal and non-personal data protection rules, including compliance with the GDPR, and ensure that gender and other social categories (such as but not limited to disability, age, socioeconomic status, ethnic or racial origin, sexual orientation, etc.), and their intersections are duly considered where appropriate, as well as Explainable AI to enhance trust and regulatory compliance including alignment with the AI Act.

In order to achieve the expected outcomes, international cooperation is encouraged in particular with Japan and the United States but also with other relevant strategic partners in third countries. Such cooperation should exploit synergies in edge AI approaches for mobility and for CCAM, as well as its integration into the vehicle architecture.

This topic implements the co-programmed European Partnership on ‘Connected, Cooperative and Automated Mobility’ (CCAM). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Connected, Cooperative and Automated Mobility’ (CCAM) in support of the monitoring of its KPIs.

Projects resulting from this topic are expected to apply the European Common Evaluation Methodology (EU-CEM) for CCAM²⁶¹.

Projects funded under this topic are encouraged to explore potential complementarities with the activities of the European Commission's Joint Research Centre's Sustainable, Smart, and Safe Mobility Unit and, where appropriate, establish formal collaboration.

HORIZON-CL5-2026-01-D6-06: Federated CCAM data exchange platform (CCAM Partnership)

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

²⁶¹ See the evaluation methodology [here](#).

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁶².</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Overview of CCAM-specific limitations of current data exchange solutions and existing dataspace related to interfaces, harmonised ontologies and taxonomies, standards, formats, monetisation / compensation;
- Mapping of information and reference data needs for KPIs collected by Member States and Associated Countries (where relevant and to the extent possible), related to impacts of CCAM technologies and solutions;
- Federated sustainable CCAM Data Exchange Platform that facilitates sharing of data for both large-scale demonstrations and deployment, interfacing existing data spaces and improving the exchange, availability, and accessibility of data for the development, testing and deployment of CCAM services (including but not limited to Digital Twins, digital scenario representations, safety assurance and validation, ADS regulation monitoring, driver behaviour, AI model training, and the collection of national/EU level statistics and Key Performance Indicators);
- Proposed governance structure for the Data Exchange Platform with a sustainability plan and viable business model.

²⁶² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope: Data sharing plays a pivotal role in supporting R&I, enabling deployment, and enhancing the competitiveness of the CCAM industry. Within the realm of data sharing, there are two distinct categories of data that are particularly pertinent: mobility data, and data for research and development. The common European mobility data space²⁶³ aims to facilitate mobility data access and sharing, and is supported by projects, notably from the Digital Europe Programme. This mobility data space will facilitate the sharing of data related to mobility patterns, traffic flow, and other macroscopic aspects that are essential for the development of CCAM solutions. Within the research, testing and deployment of CCAM solutions for the automotive as well as infrastructure sectors, there is a need for a dedicated data space tailored specifically to the requirements of CCAM stakeholders. This CCAM Data Space demands a more granular and extensive array of data to cater to the needs of both Tier X suppliers, Original Equipment Manufacturers (OEMs), traffic managers and infrastructure providers, particularly in terms of vehicle and traffic safety considerations. Specific aspects related to ongoing regulatory developments would need to be considered (e.g. Automated Driving Systems and General Safety regulations, adaption of type approval to the AI Act, including trustworthy AI integration).

Several data spaces exist or are being developed in Europe for CCAM in specific R&I initiatives. The FAME²⁶⁴ project has released a CCAM Data Sharing Framework (DSF) 2.0 describing best practices in data sharing and will develop a CCAM Federated Data Space as a proof of concept to facilitate the exchange of research and test data across R&I projects. Several CCAM Partnership R&I projects expressed interest in making data available and reusing data from other projects through the FAME Test Data Space, once it will be operational. The scenario-based validation approach for safety argumentation in highly automated functions will result in an integration of various scenario databases facilitated by a federated layer, as developed in project SUNRISE²⁶⁵ and SYNERGIES²⁶⁶. However, this integration falls short of constituting a comprehensive Data Space approach, both for new data sets and extensions of existing datasets. To achieve full Data Space functionality for CCAM, significant enhancements are required in terms of developing connectors, APIs, and protocols for seamless data exchange. Additionally, there is a need to refine user profile management systems and establish robust contractual frameworks to govern data access and usage rights. A generic data space blueprint and building blocks are being developed and governed by the Data Space Support Centre²⁶⁷. In parallel, the DeployEMDS²⁶⁸ builds a decentralised technical infrastructure and common governance mechanisms for urban mobility use cases in 9 cities and regions across Europe.

Consequently, substantial efforts are necessary to fully integrate these approaches into a cohesive and efficient Data Space environment that can effectively support the diverse needs

²⁶³ [Creating a common European mobility data space - European Commission \(europa.eu\)](https://european-council.europa.eu/media/en/press-room/pages/press-room-detail.aspx?lang=en&id=101069898)

²⁶⁴ Framework for coordination of Automated Mobility in Europe, grant agreement ID: [101069898](https://european-council.europa.eu/media/en/press-room/pages/press-room-detail.aspx?lang=en&id=101069898).

²⁶⁵ Safety assurance framework for connected, automated mobility Systems, grant agreement ID: [101069573](https://european-council.europa.eu/media/en/press-room/pages/press-room-detail.aspx?lang=en&id=101069573).

²⁶⁶ Real and synthetic scenarios generated for the development, training, virtual testing and validation of CCAM systems, grant agreement ID: [101146542](https://european-council.europa.eu/media/en/press-room/pages/press-room-detail.aspx?lang=en&id=101146542).

²⁶⁷ [Data Spaces Blueprint](https://data-spaces.eu/)

²⁶⁸ See for more information: <https://deployemds.eu/>

of the CCAM research community and industry. Moreover, extensive datasets are also indispensable for the development of low-level modules such as driver monitoring systems, perception systems, and decision-making algorithms, as well as for sensors like GNSS, radar, cameras, and lidar. While projects like AIthena²⁶⁹ and AWARE2ALL²⁷⁰ have generated valuable datasets, the lack of centralised storage and access hampers their utility. Therefore, there is a strong need to incorporate such datasets into a unified CCAM Data Space that is aligned with the data space blueprint, taking advantage of the common building blocks.

By establishing robust interfaces, ontologies, and data management architectures, the CCAM research community and industry can effectively utilise and repurpose existing data, thereby reducing costs, and facilitating the development and validation of CCAM solutions, including the creation of digital twins through synthetic data. The enhanced sharing of data across the CCAM stakeholders should also benefit national authorities, and operators in their efforts to collect KPIs to monitor wider impacts of CCAM solutions including on safety, economy, and society.

Proposed actions for this topic are expected to address all of the following aspects:

- Identify how to further evolve the data spaces for CCAM applications, connecting existing dataspace and bridging data gaps;
- Identify harmonisation and standardisation needs for taxonomies, interfaces, and data formats to push CCAM data exchange and extend and implement the CCAM taxonomies in the CCAM Test Data Space;
- Identify information needs and reference data for KPIs collected from Member States and Associated Countries (where relevant and to the extent possible) of i.e. high-level socio-economic statistics, accidents, infrastructure, vehicles;
- Establish a Federated CCAM Data Exchange Platform with tools and governance, including a viable business model to ensure the durability of the platform, which facilitates sharing of data for industry, social partners, authorities and academia that are supporting specific use cases related to: large-scale demonstrations, generation and maintenance of digital twins and representation of scenarios (for development or validation), performance and safety assessment, driver behaviour data from real and synthetic driving conditions, ADS regulation monitoring, AI model training, and common information source for national/EU level statistics and Key Performance Indicators;
- Identify and describe methods/algorithms/processes to refine and use data for the specific use cases tackled by the Platform;

²⁶⁹ AI-based CCAM: Trustworthy, Explainable, and Accountable, grant agreement ID: [101076754](#).

²⁷⁰ Safety systems and human-machine interfaces oriented to diverse population towards future scenarios with increasing share of highly automated vehicles, grant agreement ID: [101076868](#).

- Identify the effects of the EU General Data Protection Legislation (GDPR) on AI learning workflows and possible mitigation measures.

A strong alignment with the common European mobility data space and related projects²⁷¹ is expected. The work should ensure coherence and interoperability with other common European data spaces, especially regarding its cross-sectoral blueprint and building blocks, by aligning with the Data Spaces Support Centre and by using, as far as possible, the smart cloud-to-edge middleware platform Simpl²⁷². The work should build on the outcomes of the FAME project and the FAME Test Data Space ([Data Sharing - Connected Automated Driving](#)). Finally, links with related activities under the future European Digital Infrastructure Consortium ([EDIC](#)) for Mobility and Logistics Data and cooperation with the CCAM Partnership's States Representative Group (SRG) is expected. Particular attention should be dedicated towards establishing interoperability standards for data sharing within and across data ecosystems, through the implementation of the FAIR data principles and leveraging already adopted practices, especially in relevant European common data spaces.

In order to achieve the expected outcomes, international cooperation is encouraged in particular with Japan and the United States but also with other relevant strategic partners in third countries.

This topic implements the co-programmed European Partnership on 'Connected, Cooperative and Automated Mobility' (CCAM). As such, projects resulting from this topic will be expected to report on results to the European Partnership 'Connected, Cooperative and Automated Mobility' (CCAM) in support of the monitoring of its KPIs.

Projects resulting from this topic are expected to apply the European Common Evaluation Methodology (EU-CEM) for CCAM²⁷³.

Multimodal transport, infrastructure and logistics

Proposals are invited against the following topic(s):

HORIZON-CL5-2026-01-D6-07: Innovative construction and maintenance, with the use of new materials and techniques, for resilient and sustainable transport infrastructure

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 11.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a

²⁷¹ The awarded proposal should build on the outcomes of the preparatory action PrepDSpace4Mobility and the EMDS study under CEF. It should collaborate and align the deployEMDS project and the future action under call DIGITAL-2024-CLOUD-AI-06-MOBSPACE.

²⁷² More information [here](#).

²⁷³ See the evaluation methodology [here](#).

	proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 22.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Project results are expected to contribute to all of the following outcomes:

Demonstration of combined solutions for infrastructure construction that achieve the following targets:

- At least 50% of the construction materials used are recycled or sourced from recycled materials;
- Reduced pollutant emissions by at least 30% considering the entire life cycle of the infrastructure;
- Reduced degradation of ecosystems and fragmentation of habitats during construction, maintenance, operation and decommissioning of transport infrastructure (thereby contributing to maintaining biodiversity);
- Increased climate resilience of infrastructure to extreme weather and human caused events, assuring at least 80% capacity at network level during the disruptions;
- Structured analysis and recommendations on the need for EU standards in construction, inspection, maintenance and deconstruction, contributing to the decarbonisation and increased resilience of transport infrastructure;
- Guiding document on the necessary adaptations to public procurement rules that contribute to including clear sustainability and resilience award criteria.

Scope: The overarching policy background is the European Green Deal, which aims to achieve climate neutrality by 2050. In the transport area, this translates into a 90% reduction of transport-related greenhouse gas emissions by 2050²⁷⁴. To deliver the European Green Deal, there is a need to revise and upgrade numerous policies, including those for transport and large-scale infrastructures.

The EU Sustainable and Smart Mobility Strategy²⁷⁵ (SSMS), which translates this overall transport target into actions, states that infrastructure must be adapted to climate change and made resilient to disasters. In line with the SSMS, it is also important that such infrastructure should rely on clean and decarbonised energy sources, notably renewable energy, as well as on a modernised grid.

²⁷⁴ [Transport and the Green Deal - European Commission \(europa.eu\)](https://transport.ec.europa.eu/document/download/be22d311-4a07-4c29-8b72-d6d255846069_en?filename=2021-mobility-strategy-and-action-plan.pdf)

²⁷⁵ https://transport.ec.europa.eu/document/download/be22d311-4a07-4c29-8b72-d6d255846069_en?filename=2021-mobility-strategy-and-action-plan.pdf

Research in this topic should provide knowledge and technical solutions to a triple challenge: (1) limiting emissions of transport infrastructures; (2) making them more resilient to climate change; and (3) addressing environmental and biodiversity aspects. Projects should cover the entire life cycle of transport infrastructures, covering overall emissions from sourcing of materials, construction, maintenance, operation and decommissioning of the infrastructure.

Proposals should address all of the following aspects:

- Development of new methods and techniques to construct, manage, maintain and repair (including self-repair) transport infrastructures, in order to increase climate resilience and lower emissions;
- Assessment of solutions considering the principles of circularity and taking into account the entire life cycle assessment (LCA) approach;
- Cost-benefit analysis (CBA) of the solutions considering the entire life cycle of the infrastructure and accompanying business plans for their implementation;
- Application of innovative materials (e.g. green asphalt, green cement, carbon sinks) that enable transport infrastructures to become more resilient, more sustainable and emit less pollutants;
- Validation of all the proposed solutions and proofs of concepts is to be carried out in at least two large-scale demonstrations. The demonstrations should cover at least two different transport infrastructure types (e.g., road, rail, waterborne, airport) which are located on at least two different Trans European Transport Network (TEN-T) corridors. The demonstrations should also cover different environments and phases of the infrastructure life cycle (e.g. design, construction, maintenance, decommissioning);
- Analysis of EU national and international standards in construction, inspection, maintenance and deconstruction, contributing to the decarbonisation and increased resilience of transport infrastructure;
- Design of green, sustainable and innovative public procurement methods, contributing to lowering the environmental footprint, resources, and material consumption;
- Demonstration of sustainable and climate resilient infrastructure with nature-based solutions (NBS²⁷⁶), minimising the negative effects on the environment, including the degradation of ecosystems, the fragmentation of habitats and the loss of biodiversity.

The projects should develop clear indicators with baselines and quantified targets in support of the expected outcomes that are monitored for each demonstration site. With regards to the expected outcomes, projects should take into account expected technological developments and policy implementation (e.g. revised TEN-T regulation), multi-disciplinary adaptive capacity in line with the European Climate Risk Assessment²⁷⁷ (EUCRA) and the

²⁷⁶ https://research-and-innovation.ec.europa.eu/research-area/environment/nature-based-solutions_en
²⁷⁷ [European Climate Risk Assessment — European Environment Agency \(europa.eu\)](#)

Commission Communication on Managing Climate Risks²⁷⁸, in particular cascading impacts across sectors.

Proposals should consider and build on results from previous calls on resilient and sustainable infrastructure and standards,²⁷⁹ and should incorporate relevant EU guidance on the development and management of European transport infrastructures. Proposals should also build on previous results from projects on advanced materials, sensor technology, digitalisation, asset management, decision support and automation in the construction and maintenance of infrastructures. If the proposed activities and solutions involve the use of artificial intelligence (AI) systems and/or techniques, the proposal is expected to demonstrate that robustness of the solution.

HORIZON-CL5-2026-01-D6-08: Accelerating freight transport and logistics digital innovation

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 7.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: The proposals are expected to contribute to all the following outcomes:

- Extended functionalities of electronic Freight Transport Information (eFTI) platforms beyond the required actions forming part of the implementation of Regulation 2020/1056²⁸⁰ for:

²⁷⁸ [EUR-Lex - 52024DC0091 - EN - EUR-Lex \(europa.eu\)](#)

²⁷⁹ <https://im-safe-project.eu/>

²⁸⁰ Regulation (EU) 2020/1056 of the European Parliament and of the Council of 15 July 2020 on electronic freight transport information; <https://eur-lex.europa.eu/eli/reg/2020/1056/oj>.

- new use cases, solutions and applications, enabling harmonised electronic business-to-business (B2B) information sharing and exchange in multimodal logistics chains and hubs such as those related to greenhouse gases (GHG) reporting, sustainability claims and other actions leveraging efficient and green freight operations in the supply chain;
- complementary applications and services for electronic business-to-authority (B2A) information sharing aimed to support the implementation by businesses of relevant Union regulatory frameworks in transport or in other relevant policy fields, such as in the context of smart enforcement, statistics, customs, e-invoicing, sustainability reporting, data spaces, GHG and external costs calculators;
- Best practices to boost and accelerate the adoption of eFTI framework and data sharing innovations by companies and in particular by SMEs are established;
- Improved efficiency in operations and freight transport, through the provision of advanced digital connectivity and interoperability of the information shared electronically between actors in both B2B and B2A perspectives, compared to the baseline defined in the start of the project, is demonstrated and quantified;
- Reduced administrative burden and costs associated with B2B data sharing and B2A regulatory and non-regulatory reporting are demonstrated and quantified.

Scope: Electronic Freight Transport Information (eFTI) platforms established in line with Regulation 2020/1056 will play a central role in facilitating the implementation of business-to-authority (B2A) information exchange processes related to multimodal transport of goods. In line with the Regulation's requirements, common specifications for a single comprehensive data set and harmonised protocols for data sharing will ensure interoperability of the information shared electronically between actors, and the requirements for rights-based access-control system will establish safeguards for cybersecurity and trust. The use of electronic means to exchange regulatory information is also expected to reduce administrative costs for economic operators, to enhance the efficiency of freight transport services and to facilitate green transformation of the logistics sector.

Therefore, given their potential, apart from specific B2A functionalities, eFTI platforms could also serve as an enabler for other universal, open and affordable solutions and tools to achieve digital interconnectivity of logistics systems and platforms including in a business-to-business (B2B) perspective.

The proposals should unlock the potential of eFTI platforms for further functionalities, beyond the scope of Regulation 2020/1056, to new B2B services and applications as well as other B2A uses.

Proposals should refer, as a core principle, to the legislative framework and specific technological solutions provided through Regulation 2020/1056, while duly reflecting the latest technological state of the art for electronic information exchange. Where relevant, and

especially in B2B perspective, they should apply and build upon the concepts and solutions developed in other Union initiatives aimed to facilitate data sharing and exchange in transport, the [Digital Transport and Logistics Forum \(DTLF\)](#) and the [European mobility data space \(EMDS\)](#).

Outside the scope of this topic is any type of architecture, federation of platforms or similar, as these are already delivered by eFTI and DTLF. Proposals also should not develop functionalities already required in the current scope of the eFTI Regulation. Instead, they are expected to leverage and/or extend functionalities of eFTI platforms that are in operation at the time of the implementation of the project, to ensure the effective implementation of new use cases.

Building on the functionalities, requirements and implementation specifications for eFTI platforms provided for in the eFTI Regulation and its implementing and delegated acts, the proposals should address all of the following aspects:

- Develop technical solutions and tools, at least at the level of operational prototype demonstration (TRL7), for complementary applications and services for electronic B2A information sharing;
- Develop universal, open and affordable solutions and tools to enable electronic B2B information sharing in collaborative logistics processes. The proposed solutions should be implemented with minimal integration effort for industrial stakeholders, for instance through the usage of Artificial Intelligence to facilitate data and information interoperability.
- Develop solutions and tools to facilitate SMEs engagement in the digital freight transport and logistics ecosystem and the adoption of solutions by SMEs.
- Define multiple use cases, services and application of eFTI platforms for B2B and B2A processes duly accounting of relevant existing solutions and projects and identifying specific barriers to interoperability and universal adoption.
- Identify and define relevant data to be added to the existing eFTI common dataset to support the new use cases, services and functionalities; while addressing aspects of data sovereignty, data privacy and cybersecurity, pursuant to the relevant Union legislation;
- Assess and provide recommendations for B2B framework arrangements, including standard data exchange contracts, identification/authentication and authorisation to ensure trusted operations in data sharing and exchange in freight transport and logistics;
- Define and seek synergies with relevant EU frameworks and policies related to the exchange of transport emissions data (such as new Commission's proposal for the Regulation on CountEmissions EU ²⁸¹, the Corporate Sustainability Reporting

²⁸¹ Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the accounting of greenhouse gas emissions of transport services (Text with EEA relevance); <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52023PC0441>

Directive²⁸², and other relevant Union acts) to facilitate their effective and harmonised implementation, including through the establishment of an open source emissions calculators, as well as the exploitation of data sharing frameworks for carbon reporting between operators in the same supply chain;

- Assess the interdependencies and needs with horizontal Union strategies and legislation such as GDPR²⁸³, digital identities²⁸⁴, data spaces²⁸⁵, AI act²⁸⁶, Data Governance Act²⁸⁷, Cybersecurity Act²⁸⁸; identify best practices and provide recommendations for compliance.
- Define and test B2A and B2B solutions and use cases in at least 2 demonstration environments/ecosystems involving platforms and users. B2B use cases should be led by industry stakeholders, in particular shippers and logistics service providers (e.g. freight forwarders, transportation companies). B2A use cases should be developed in cooperation with industry stakeholders, researchers and public administrations, including statistical offices.
- Identify and develop best practices, map solutions and value streams. Provide recommendations on incentives, capability building, training and technology adoption support schemes as well as trust building mechanisms – to facilitate, encourage and accelerate the adoption of eFTI platforms and data sharing and exchange innovations by companies and in particular by SMEs.

²⁸² Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting (Text with EEA relevance); <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022L2464>

²⁸³ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation); <https://eur-lex.europa.eu/eli/reg/2016/679/oj>

²⁸⁴ Regulation (EU) 2024/1183 of the European Parliament and of the Council of 11 April 2024 amending Regulation (EU) No 910/2014 as regards establishing the European Digital Identity Framework; <https://eur-lex.europa.eu/eli/reg/2024/1183/oj>

²⁸⁵ <https://digital-strategy.ec.europa.eu/en/policies/data-spaces>

²⁸⁶ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act) (Text with EEA relevance); <https://eur-lex.europa.eu/eli/reg/2024/1689/oj>

²⁸⁷ Regulation (EU) 2022/868 of the European Parliament and of the Council of 30 May 2022 on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Act) (Text with EEA relevance); <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32022R0868>

²⁸⁸ Regulation (EU) 2019/881 of the European Parliament and of the Council of 17 April 2019 on ENISA (the European Union Agency for Cybersecurity) and on information and communications technology cybersecurity certification and repealing Regulation (EU) No 526/2013 (Cybersecurity Act) (Text with EEA relevance); <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019R0881>

HORIZON-CL5-2026-01-D6-09: Reliable data and practices to measure and calculate transport emissions in multimodal transport chains

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁸⁹ .

Expected Outcome: Project results are expected to contribute to all the following outcomes:

- Input is provided for the implementation of the existing and forthcoming Union's regulatory initiatives related to measurement, calculation and reporting of emissions in transport, such as Regulation (EU) 2023/1805 (FuelEU Maritime)²⁹⁰, Regulation (EU) 2023/2405 (ReFuelEU Aviation)²⁹¹, and the recent Commission's proposal for the Regulation on the accounting of greenhouse gas emissions of transport services (CountEmissions EU)²⁹²;

²⁸⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁹⁰ Regulation (EU) 2023/1805 of the European Parliament and of the Council of 13 September 2023 on the use of renewable and low-carbon fuels in maritime transport, and amending Directive 2009/16/EC

²⁹¹ Regulation (EU) 2023/2405 of the European Parliament and of the Council of 18 October 2023 on ensuring a level playing field for sustainable air transport

²⁹² COM(2023) 441 final

- Methodological components are developed and proposed to complement the methodology for accounting emissions provided under the Commission's proposal on CountEmissions EU.

Scope: Greenhouse gas (GHG) emissions from transport represent around 25% of total man-made GHG emissions and continue to grow. The negative impact of these is further strengthened by the existence of other external costs of transport, including air pollution, noise, congestion and accidents. The EU, Member States and industry have made considerable efforts to reduce transport-related GHG emissions and associated external costs.

Accurate and reliable information on emissions is an important tool to increase effectiveness of specific emission reduction measures undertaken by public authorities and businesses. Over the past 15 years, a lot of progress has been made at EU level and globally through new regulatory actions and continuing collaboration between actors to improve the transparency of transport GHG emissions and external costs monitoring. This is manifested through:

- Regulatory initiatives including Regulation (EU) 2023/1805 (FuelEU Maritime)²⁹³, Regulation (EU) 2023/2405 (ReFuelEU Aviation)²⁹⁴, Regulation (EU) 2015/757 (EU MRV)²⁹⁵ and especially, the recent Commission's proposal for the Regulation on the accounting of greenhouse gas emissions of transport services (CountEmissions EU)²⁹⁶, and Directive (EU) 2023/2413 (Renewable Energy Directive);
- Relevant EU research projects, including "Carbon Footprint of Freight Transport" (COFRET), "Logistics Emissions Accounting & Reduction Network" (LEARN) and the on-going "Creating Legitimate Emission Factors for Verified GHG Emission Reductions in Transport" (CLEVER)²⁹⁷;
- Standardisation work, including ISO 14083, the official international standard developed between November 2019 and October 2022 and published in March 2023 as part of the 14000 family of ISO GHG-related standards²⁹⁸;
- Regular updates of the Handbook on the External Costs of Transport²⁹⁹;
- Industry initiatives, such as the Global Logistics Emissions Council (GLEC) Framework, the industry-led guideline for GHG calculation and reporting in the global logistics sector.

²⁹³ Regulation (EU) 2023/1805 of the European Parliament and of the Council of 13 September 2023 on the use of renewable and low-carbon fuels in maritime transport, and amending Directive 2009/16/EC

²⁹⁴ Regulation (EU) 2023/2405 of the European Parliament and of the Council of 18 October 2023 on ensuring a level playing field for sustainable air transport

²⁹⁵ Regulation (EU) 2015/757 of the European Parliament and of the Council of 29 April 2015 on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport, and amending Directive 2009/16/EC

²⁹⁶ COM(2023) 441 final

²⁹⁷ <https://emissionfactors.eu/>

²⁹⁸ This standard has also been formally adopted by the European Committee for Standardisation (CEN) under the reference CEN ISO 14083

²⁹⁹ <https://op.europa.eu/en/publication-detail/-/publication/9781f65f-8448-11ea-bf12-01aa75ed71a1>

Building on the initiatives listed above, proposals should undertake further work to ensure that:

- The full climate impact of transport operations is covered in a comprehensive and consistent way;
- Relevant open items identified in the emissions accounting reference methodology set out under the Commission's proposal on CountEmissions EU can be scientifically clarified and closed;
- Any detailed tweaks to the methodology that have come to light through application can be developed and tested in view of the implementation of the CountEmissions EU framework;
- New technologies, such as generative Artificial Intelligence, are considered in developing datasets and methodologies;
- Relevant data is available for the proper implementation and seamless integration of requirements set in other EU climate related legislation in transport, including Regulations on Fuel EU Maritime, ReFuelEU Aviation, EU MRV, and Regulation (EU) 2020/1056 on electronic freight transport information³⁰⁰.

The Action will play a central role in contributing to the establishment of an unambiguous scientific framework aimed to tackle emissions in transport. However, the Action should also facilitate alignment between EU policy development and market implementation, especially towards enabling market-based accounting approaches that would support proactive investment in low emission fuels and associated transport services.

The proposals should address all of the following aspects:

- Explore, assess and establish the state of the art regarding issues of measuring and calculating specific types of transport-related emissions for which there is no clear consensus on the market, in particular:
 - o black carbon emissions, which primarily result from the combustion of fossil fuels in compression ignition engines;
 - o radiative forcing, which has been suggested as having a strong supplementary climate impact at high altitude and is already included in an inconsistent manner across some, but not all, transport GHG reporting programs;
 - o GHG emissions from vehicle manufacturing and scrappage, which, although not directly linked to transport operations, do contribute to overall life cycle transport emissions;

³⁰⁰ Regulation (EU) 2020/1056 of the European Parliament and of the Council of 15 July 2020 on electronic freight transport information

- o GHG emissions that result from the installation of transport infrastructure, which would need to include the definition of rules for the combination of operational and life cycle emission calculations into a meaningful and consistent presentation format;
- o GHG emissions related to the maintenance operations associated with transport operations that are currently excluded;
- o GHG emissions from information and communication technology (ICT) equipment and data servers that support the delivery of transport operations.
- Clarify specific methodological issues for enabling more accurate quantification of emissions and setting proper incentives towards efficient and sustainable transport options, addressing in particular:
 - o a detailed methodology for GHG emissions stemming from temperature-controlled transport and cool chain operations;
 - o allocation of GHG air transport emissions across passengers and freight transported on the same aircraft.
- Based on relevant European/national/sectorial repositories, explore, assess and contribute to an EU core dataset of default values for GHG emissions intensity of transport services, including for supporting relevant EU regulatory initiatives (such as CountEmissions EU);
- Building on the results of the CLEVER project, where relevant, update the list of applicable GHG emission factors for emissions stemming from energy production, distribution and use, in particular in the context of relevant EU regulatory initiatives (such as CountEmissions EU). Consistency with data and methodologies in current energy legislation such as Directive (EU) 2023/2413 (Renewable Energy Directive)³⁰¹ must be ensured;
- Define R&I gaps on emissions accounting of transport and provide scientifically sound recommendations to address those gaps to improve the existing GHG emissions measuring framework.

The project's main governance (e.g. Steering Group, Advisory Board) is expected to provide for direct involvement of all relevant stakeholders.

Mechanisms to ensure coordination between other ongoing or selected projects (e.g. CLEVER) during their implementation should be put in place where applicable.

³⁰¹ Directive (EU) 2023/2413 of the European Parliament and of the Council of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652

HORIZON-CL5-2026-01-D6-10: Integrating inland waterway transport in smart shipping and multimodal logistics chains

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Enhanced solutions and tools to better integrate inland waterway transport (IWT) into the overall logistic chains and increase the modal share of inland waterway transport, are developed and demonstrated in use cases in line with the objectives set up in NAIADES III³⁰²;
- Gains (compared to the baseline defined in the beginning of the project) in terms of operational efficiency, as well as environmental and social impact from the integration of IWT in multimodal logistics chains, are clearly identified, demonstrated and measured;
- Recommendations for an EU regulatory framework on harmonised smart shipping at EU level, as well as input for related standardisation, harmonisation and amendments to Inland Water Transport Digitalisation Vision³⁰³ to reflect findings from the project;
- Stakeholder engagement and communication campaigns and events to increase visibility and use of IWT are organised.

Scope: While the increased use of sustainable transport modes and multimodal solutions are critical levers for transport, logistics and supply chain decarbonisation, and despite obvious environmental advantages, the modal share of the EU IWT sector has remained below expectations over the last decades. The seamless integration of inland waterway transport in multimodal supply chains requires the physical and digital connection to other land transport modes and maritime transport. Digitalisation is not a goal in itself but an important supporting

³⁰² COM(2021) 324 final eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0324
³⁰³ <https://ec.europa.eu/transparency/expert-groups-register/core/api/front/document/98613/download>

development required to remain competitive and to improve the connectivity to ports, other transport modes and the clients (e.g. to keep the direct costs low and to allow synchromodal solutions). Digital interconnectivity (with logistics systems and other digital platforms for transport) is crucial to increase the modal share of IWT in multimodal logistics chains and to be able to significantly contribute to the modal shift goals as presented in the Sustainable and Smart Mobility Strategy³⁰⁴.

Proposals are expected to focus on the integration of smart vessels, smart infrastructure, smart data and smart governance in multimodal logistics chains. The proposals should address all of the following aspects:

- Building on the results of previous and on-going Horizon 2020, Horizon Europe and Connecting Europe Facility (CEF) funded projects, identify, develop and test robust technical and operational solutions and tools (also exploring innovative technologies such as generative Artificial Intelligence) to connect physically and digitally IWT to existing land and waterborne multimodal logistics chains for a sustainable, efficient, safe, resilient, automated IWT with a view to synchromodal transport;
- Define and develop key parts of the IWT-related aspects of a common framework for multi-modal data sharing, while enabling compatibility with legacy systems; building upon the concepts and solutions developed in other Union initiatives aimed to facilitate data sharing in transport, such as the Digital Transport and Logistics Forum (DTLF), the European mobility data space (EMDS), the electronic Freight Transport Information regulation; and considering high value datasets, the revised Intelligent Transport Systems (ITS) Directive³⁰⁵ and River Information Services (RIS) Directive. Outside of the scope are any type of new platforms or similar; rather, proposals are expected to leverage existing frameworks or platforms to ensure effective use case implementation (e.g. proposed solutions could interface with and be integrated in existing platforms used by shippers, carriers and freight forwarders to connect with multimodal information). Proposals could also identify datasets already available or that could be developed in order to enhance the integration of IWT in multimodal supply chains;
- Define and test applications and use cases, building on the proposed solutions for advanced cooperative Smart Shipping and Smart Logistics, including integration with the physical infrastructure, in at least four demonstration pilots in actual operational environments (minimum at TRL 7). The pilots should focus on better integrating inland waterway transport in the multimodal supply chains, with a focus on cross border applications, on the accessibility and usability of node services in an automated/digital manner, and on efficient and green operations. The pilots should cover different types of goods, different routes and IWT basins (to have better EU geographical coverage), possibly along the Trans-European Transport Network corridors. To ensure a user and governance perspective approach, the pilot cases should be led by industry stakeholders

³⁰⁴ Sustainable and Smart Mobility Strategy – putting European transport on track for the future, COM/2020/789 final

³⁰⁵ [Directive \(EU\) 2023/2661](#)

(e.g. freight forwarders, intermodal operators), in cooperation with shippers and public administrations (involvement of public administrations is considered a priority). The impact of increased automation and digitalisation on all stakeholders should be considered as part of the requirements definition and throughout the design life cycle;

- Through the pilots and the application of the proposed solutions, analyse the existing relevant regional/national regulations, identify gaps and legal barriers, and propose recommendations for an EU regulatory framework on harmonised smart shipping at EU level, as well as input for the standardisation and harmonisation of the smart shipping components to the relevant standardisation bodies (e.g. CESNI, CEN, CENELEC);
- Based on the pilots' results, assess and quantify, in a comprehensive, structured and substantiated analysis, the environmental, economic and social benefits of smart shipping (including automated vessels and the link to the physical infrastructure), and the effects of increasing the use of IWT in multimodal logistics chains. Develop and propose new business models to incentivise the use of IWT;
- Foster collaboration among key stakeholders, including transport operators, logistics providers, shippers, policymakers, and technology developers, also by implementing communication activities and organising an outreach event displaying the pilots' results and the demonstrated advantages of integrating IWT in multimodal logistic chains.

HORIZON-CL5-2025-04-D6-11: Innovative air mobility and services for sustainable and smart urban, peri-urban transport – Societal Readiness pilot

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up</i>	The rules are described in General Annex G. The following

<i>of the Grant Agreements</i>	exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ³⁰⁶ .
<i>Exceptional page limits to proposals/applications</i>	The page limit of the application is extended by two pages to 52 to properly address Societal Readiness-related issues.

Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- Enabling very low-level unmanned aviation, specifically Innovative Air Mobility (IAM) and services, for sustainable and smart urban mobility in cities, by developing and refining tools for urban planning, outreach, and system forecasting in line with the Drone Strategy 2.0³⁰⁷. Climate-neutral, smart, resilient, and safe IAM, accepted by local communities;
- Institutional capacities to enable IAM are built up;
- New tools and services for optimising IAM in cities and other areas, as well as workable governance arrangements for a multimodal transport network;
- Evidence-based guidelines and recommendations, co-designed with and provided to cities, on how to develop a sustainable urban air mobility eco-system (e.g. planning and development processes for local authorities, integration of IAM in Sustainable Urban Mobility Plans, etc.);
- Advanced understanding and quantification of the value of IAM, its benefits and use cases, particularly in the urban logistics sector;
- Enhanced multimodality, urban logistics planning/flow and communication between stakeholders, which can be replicated by other cities to enable IAM;
- Creation of jobs and economic growth by implementation of urban air mobility services in the long-term;
- Responsiveness to a deeper understanding of the needs and concerns of diverse social groups involved in or potentially affected by the R&I development, thereby increasing the potential for beneficial societal uptake, and building trust in results and outcomes.

³⁰⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

³⁰⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022DC0652>

Scope: The proposal is expected to develop the conditions and guidelines for a sustainable, smart, safe and resilient ecosystem for urban air mobility and services, focusing on the urban logistics sector, where drones could be more easily demonstrated and accepted than for passenger mobility.

Proposals will have to address at least seven the following points:

- Prepare a roadmap to define the needs for new or upgraded infrastructures and logistics, to facilitate innovation in IAM technologies and operations;
- Collaborate with city authorities to develop guidelines for integrating and co-designing drone infrastructure, such as vertiports, landing areas, and charging stations, into Sustainable Urban Mobility Plans, ensuring environmental, safety, security, and privacy considerations;
- Assess the effects of IAM traffic, including electric vertical take-off and landing (eVTOL) downwash/outwash³⁰⁸ on urban microclimate, as well as the requirements for a vertiport area, to enable safe IAM operations (incl. take-off and landing), for different VTOL aircraft and rotor configurations;
- Building on EASA's work and other studies on drone noise, assess and define the noise monitoring needs and tools that cities will have to implement, in areas where drone and IAM infrastructures and operations are planned, to ensure compliance with noise limits;
- Analyse and make a proposal on how IAM could be integrated in the existing freight transport flows in cities, to boost multimodality;
- Perform demonstration activities on IAM for cargo delivery (e.g. medical supplies), with data collection and flight monitoring between different landing/take-off areas/vertiports, while ensuring safety of operations in densely populated areas;
- Evaluate and quantify the impact and potential benefits of cargo delivery by drones and eVTOLs on city congestion, noise, pollution, as well as on current and future airspace capacity to accommodate large scale operations;
- Develop viable business models for sustainable IAM services for logistics operators, identifying key use cases where the benefits are the highest;
- Collaborate with city authorities to align IAM services with citizen needs, developing strategies to raise public awareness and secure buy-in for drone integration. Identify attractive benefits and incentives for early adopters to accelerate market uptake of IAM operations and services;

³⁰⁸ Downwash is the downward flow of air produced by the propulsion system of an electric vertical take-off and landing (eVTOL) aircraft, such as the thrust from rotors. Outwash refers to the outward flow of the air that results from the downwash.

- Report on lessons learnt and recommendations to be shared with other cities for replication, and develop training / competence building packages for the relevant stakeholders (e.g., cities authorities involved in the design of a sustainable IAM ecosystem);
- Analysis of potential rebound effects and arising questions of (energy) sufficiency with regard to extensive use and large-scale operations of IAM.

Projects must involve cities authorities (multi-level governance) and logistics operators, to ensure user needs are duly considered. Projects should build on previously funded Horizon 2020 projects such as AiRMOUR³⁰⁹.

The action aims to exploit synergies with the EU Mission on Climate-Neutral and Smart Cities and with the SESAR 3 Joint Undertaking, while the alignment with the activities of EASA is highly recommended.

This topic is a Societal-Readiness pilot:

- Proposals should follow the instructions applying to the Societal readiness pilot, as described in the introduction of the Horizon Europe Main Work Programme 2025 for Climate, Energy and Mobility. They entail the use of an interdisciplinary approach to deepening consideration and responsiveness of research and innovation activities to societal needs and concerns.
- This topic requires effective contribution of the relevant SSH expertise, including the involvement of SSH experts in the consortium, to meaningfully support Societal Readiness. Specifically, SSH expertise is expected to facilitate the socio-technological interface and enable the design of project objectives with Societal Readiness related activities.

Safety and resilience

Proposals are invited against the following topic(s):

HORIZON-CL5-2025-04-D6-12: Safe Human-Technology Interaction (HTI) in the vehicle systems of the coming decade – Societal Readiness Pilot

Call: Cluster 5 Call 04-2025 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

³⁰⁹ <https://airmour.eu/>

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).³¹⁰.</p>
<i>Exceptional page limits to proposals/applications</i>	The page limit of the application is extended by two pages to 52 to properly address Societal Readiness-related issues.

Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

- Increased understanding of the synergies between driver and driving assistance systems capabilities and implementation of tailored, “self-learning” Human-Technology Interaction (HTI) strategies in order to improve road safety;
- Avoidance of crashes related to mode confusion during the use of driver’s assist, the hand-over and take-over phase;
- Advanced standardisable assessment tools and methods for improved HTI;
- Development of training methods for new and experienced drivers with respect to the evolving technologies;
- Responsiveness to a deeper understanding of the needs and concerns of diverse social groups involved in or potentially affected by the research and innovation (R&I)

³¹⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

development, thereby increasing the potential for beneficial societal uptake, and building trust in results and outcomes.

Scope: The increasing automation of road transport is bringing up new challenges especially in lower automation levels (level 3 and below) when driving control is transitioning from the driver to the vehicle or vice versa. For these levels, ensuring the right level of driver vigilance with respect to the context and the automation level is important in order to avoid dangerous situations because of cognitive distraction.

In addition, systems based on HTI are generally built on a non-stationary and non-deterministic foundation – human behaviour. Therefore, the concept of individually “adaptive” systems has to be followed and elaborated in all its particular aspects, as the consideration of “average” human behaviour is not sufficient.

This has large implications on the design of HTI systems.

Such systems should provide a reliable and seamless interface between the driver and the vehicle in normal driving conditions as well as in specific situations with a risk of generating high cognitive load, diverted attention, inattention, impaired driving, or in the case of instantaneous limitations in driving capabilities.

As drivers and their experience, as well as driving conditions, may vary a lot, HTI systems will need to address a wide variety of use cases in order to ensure a relevant Operational Design Domain (ODD)³¹¹. Therefore, in-cabin monitoring systems with adequate accuracy are key to have a clear understanding of the driver state, while considering all contextual in/out cabin data, so that the vehicle can propose a pertinent and tailored strategy to prompt the required driver action or behaviour.

Advances in in-cabin monitoring and multi-modal sensing technologies, as well as robust detection/prediction of driver cognitive status adapted to the situation awareness, are necessary to achieve these objectives. The same applies to the need to link interior with exterior sensing capabilities.

In addition, it is necessary to enhance drivers’ understanding of the assisted and automated driving system and to avoid mode confusion. In this aspect, the implications of automation on driver training and driver's licence requirements should be investigated. However, training methods for experienced drivers should also address the evolving technologies. This could include innovative training methods that prepare drivers for various mode transitions and safety critical scenarios like the development of virtual and mixed reality training approaches. The automation status and the limits of the system should be clearly communicated via the HTI to prevent mode confusion, enhance trust, and avoid unnecessary deactivation of the assistance or automation systems.

Special attention should be dedicated to the “hand-over” and “take-over” phases. Hand-over/take-over requests should be done considering the context (e.g. information from other

³¹¹ Results from the project of topic HORIZON-CL5-2023-D6-01-02 could be relevant for this issue.

vehicles or infrastructure) and the state of the driver in a way to minimise cognitive stress related to hand-over and take-over. In this context, it is important to investigate standardised requirements for the human-machine interface (including in case of system failure), including their assessment.

In this respect, the proposals should focus on developing strategies to prevent driver disengagement and minimise cognitive load during critical situations. Additionally, behavioural models and methodologies should be created to identify activities or behaviours that the vehicle's human-machine interface (HMI) should avoid or block (such as entertainment systems that may distract the driver from driving tasks). These strategies should be scalable based on the sophistication of the vehicle's sensing capabilities.

Moreover, proposals should address use cases involving specific populations, such as elderly drivers with decreased sensing abilities and higher sensitivity to cognitive load, young and inexperienced drivers, and professional drivers performing multiple tasks simultaneously. For these groups, a key question is how to meet their unique needs and how to balance tailored (or personalised) vs. standardised approaches for the best results. When considering these groups, proposals are expected to consider the gender dimension.

Also, trust is mandatory for the acceptability of these systems: precision, reliability, and transparency need to be ensured. In particular, the vehicle response to a given situation as well as the level of information to be conveyed needs to be coherent and logical. Relevant research areas to achieve this objective will be the definition of multi-modal and multi-sensorial vehicle warning and response strategies for the safe management of critical phases considering user responsiveness and the severity of scenarios.

HTI systems should be upgradable both in software and in hardware with minimal disruption for the users, while ensuring that the intended effect and functionality is improved or at least maintained. A cross-fertilisation opportunity would be to investigate how other transport modes (e.g. aviation) handle upgrades/updates with minimal disruption for the user.

This topic is a Societal-Readiness pilot:

- Proposals should follow the instructions applying to the Societal readiness pilot, as described in the introduction of the Horizon Europe Main Work Programme 2025 for Climate, Energy and Mobility. They entail the use of an interdisciplinary approach to deepening consideration and responsiveness of research and innovation activities to societal needs and concerns.
- This topic requires effective contribution of the relevant social sciences and humanities (SSH) expertise, including the involvement of SSH experts in the consortium, to meaningfully support Societal Readiness. Specifically, SSH expertise is expected to facilitate the socio-technological interface and enable the design of project objectives with Societal Readiness related activities.

Further research and data collection is needed to ensure a better understanding of synergies between driver and assistance systems, to evaluate their performances in different contexts

and user scenarios. This will enable appropriate adaptive and “self-learning” strategies to be tailored to the individual driver abilities and preferences.

In consideration of the above, proposals should address all the aforementioned aspects and issues in order to achieve the expected outcomes.

Research needs should be addressed in coherence and continuation with topics HORIZON-CL5-2021-D6-01-10, DT-ART-03-2019, HORIZON-CL5-2022-D6-01-02³¹², as well as HORIZON 2020-MG-2018-TwoStages (MG-2-1-2018).

HORIZON-CL5-2026-01-D6-13: Safety of Cyclists, Pedestrians and Users of Micromobility Devices

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-6 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).³¹³</p>

Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

³¹² <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl5-2021-d6-01-10>
<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl5-2022-d6-01-02>

³¹³ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Improved (compared to the current figures for the locations selected for the pilot testing) road safety (actual and perceived) for pedestrians, cyclists, e-cyclists and users of other micro-mobility devices, considering that the safety of these users is not only at risk from motorised vehicles, but also from their interaction with road users with higher masses or operating speeds (e.g. between e-bikes and pedestrians);
- An in-depth analysis and assessment of the safety associated with the emergence of electrically assisted small vehicles such e-bikes, e-cargo bikes, e-scooters, to be referred to as micromobility modes, that may be shared or own, and are used for personal mobility (e.g. commuting) and the transportation of goods (e.g. parcel delivery);
- Increased (compared to the current figures for the locations selected for the pilot testing) use of active and micromobility modes in all age and socioeconomic groups as a result of improved safety;
- Standardisation guidelines for the authorities (cities authorities, police, and hospitals) on how to report crashes that involve micromobility modes with the objective to avoid under- and/or misreporting;
- Guidelines for the city authorities on how to incorporate micromobility modes in their Sustainable Urban Mobility Plans (SUMP) and account for the safety and convenience of all road users;
- Development of mitigating solutions for the adverse impact on the safety of cyclists, pedestrians, and other users of the changing car fleet towards bigger and heavier vehicles;
- In depth analysis of the impact of road infrastructure (e.g. design, markings, degradation status, quality, network connectivity) on the safety and comfort of cyclists, pedestrians, and micromobility users and development of mitigation solutions;
- Assessment methodologies to evaluate the safety potential and the effectiveness of advanced safety measures.

Scope: The share of trips made by active modes is increasing, which is in line with the United Nations Sustainable Development Goals. This increase is linked to cities actively placing more focus on the mobility and safety needs of pedestrians, cyclists, e-cyclists and users of other micro-mobility device, which materialises in new regulations, and in new or improved infrastructure. However, pedestrians and cyclists remain heavily affected by crashes. Concurrently, the use of electrically assisted devices (such as e-bikes, e-scooters, e-cargo bikes, mobility systems used by people with disabilities, etc.) – to be referred to as micromobility modes – is increasing exponentially because these modes represent an efficient means of personal mobility, as well as a new and effective mode for the last-mile delivery of goods within the city area. Micromobility modes, shared and owned, have been adopted by commuters, tourists, the elderly, food and goods delivery companies, and come in varying sizes and operating speeds. When their use emerged, micromobility modes were associated

with high hospitalisation rates, mainly for the micromobility users themselves, but also pedestrians and cyclists. While efforts have been made to regularise and standardise these vehicles, especially in the case of shared e-scooters, there is still a significant knowledge gap related to the operational safety of these vehicles in cities.

Proposals submitted under this topic should address all of the following aspects:

- Collect and use exposure data when analysing the safety of pedestrians, cyclists, and micromobility users, and identify crash contributing factors and their interactions;
- Provide an extensive analysis of the safety needs, as well as tailored safety measures for cyclists and each type of micromobility mode (e.g. shared e-scooters versus owned e-bikes), while taking into account the trip purpose (e.g. recreational ride versus delivery of goods), and the socioeconomic and demographic characteristics of the users;
- Assess the actual and perceived safety risk of pedestrians and cyclists due to the emergence of micromobility modes that operate at higher speeds and that have increased in size and weight;
- Quantify the impact of the geometric design, quality, and continuity of the cycling infrastructure on the safety of cyclists, pedestrians and micromobility users, considering their increasing demand, operating speeds, and size of vehicles;
- Assess the potential effectiveness of vehicle-to-everything (V2X) technologies in decreasing conflicts and near misses between pedestrians, cyclists and micromobility vehicles, and users and motorised vehicles;
- Identify best practices in the design of bicycles and micromobility vehicles in terms of stability and the avoidance of single crashes, contributing to the underlying development of a draft European regulatory framework on the type-approval of micromobility vehicles or self-certification based on harmonised standards;
- Identify, define and pilot test the following in at least two clearly identified real-life urban environments:
 - o new geometric designs of infrastructure to ensure safe, seamless, and comfortable mobility for pedestrians, cyclists and users of micromobility modes while accounting for the increasing demand, higher operating speeds and weight and size of e-bikes, e-scooters and all types of micromobility devices;
 - o smart technologies (V2X) to assess their effectiveness in preventing and decreasing conflicts between pedestrians, cyclists, micromobility modes users and motorised traffic;
 - o road safety requisites, requirements, rules and/or regulations that could be put in place by local authorities in order to increase the take-up and the safety of active

and micromobility modes in all age and socioeconomic groups, by 20% compared to the baseline at the start of the project;

- o development of a comprehensive, real-time information platform for cyclists that includes data on route accessibility, signage, and infrastructure conditions.

Special focus should be paid to supporting the safety of user groups with particular vulnerability including people with disabilities (physical, mental, cognitive, developmental, intellectual, sensory, etc).

Proposals are invited to explain how the work supports local/regional/national authorities' efforts to deliver on the objectives of the Vision Zero Strategy, the Strategic Action Plan on Road Safety and the EU Road Safety Policy Framework 2021-2030 as well as on the integration of road safety policies and programmes in Sustainable Urban Mobility Planning.

Proposals should plan for an active collaboration with the well-recognised initiatives in the field of road safety and urban mobility such as the European Road Safety Observatory and the CIVITAS initiative. In addition, proposals should demonstrate that the proposed approaches build upon the results from previous research actions³¹⁴ and liaise and collaborate with the projects that will be selected under topic "HORIZON-MISS-2025-06-CIT-CANCER-01: Walking and cycling: increasing their modal share to reap health benefits and emission reductions and integrating active mobility and micro-mobility devices, with smart technologies and infrastructure".

This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts and institutions, as well as the inclusion of relevant SSH expertise, to produce meaningful and significant effects enhancing the societal impact of the related research activities, with a focus on human-technology interaction, responsiveness of safety solutions and how this varies across different population groups, and behavioural norms.

HORIZON-CL5-2026-01-D6-14: Predicting and avoiding road crashes based on Artificial Intelligence (AI) and big data

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.

³¹⁴ E.g. <https://cordis.europa.eu/project/id/861570> and <https://cordis.europa.eu/project/id/723430> projects

<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following exceptions apply: subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-6 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ³¹⁵ .

Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

- Knowledge of high-risk locations along the road network becoming available, before crashes actually occur, enabling road authorities to deploy appropriate countermeasures proactively;
- Predictive identification of safety-critical situations based on data from multiple sources and enabling real-time interventions to avoid crashes;
- Determination of the optimal sample size to allow for reliable real-time crash occurrence prediction;
- Enhanced monitoring of traffic flows and incorporation of traffic flow variations and patterns in real-time crash prediction, which will also lead to more effective traffic management by foreseeing unexpected or disruptive events.

Scope: One of the principles of the Safe System Approach is to turn from mainly re-active to pro-active management of road safety, i.e. not to derive needs for intervention primarily from crash investigations, but to intervene before serious crashes happen. The ubiquitous gathering of ever-growing amounts of data and their processing in the digital transport system support this idea providing valuable information on traffic situations and events. Potential data sources include amongst others: smart phones, wearables, connected vehicles, drones, road-

³¹⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

side sensors (e.g. camera, radar), etc. Progress in computing power, in the accuracy of location services and in video analytics are further enablers in the processing and analysis of such data in order to identify safety-critical situations or conflicts based on surrogate safety metrics.

In terms of crash prediction modelling artificial intelligence has the potential to identify the underlying risk and the complex relationships between large and diverse datasets which in turn could lead to the identification of crash contributing factors and their interrelations. The identification of these risk factors may then allow predicting safety-critical situations at quantifiable risk levels and guide the proactive implementation of crash avoidance measures, as proposed amongst others by the International Transport Forum at the Organisation for Economic Co-operation and Development (OECD). Ideally, interventions would be feasible in real-time and increase the safety of all road users.

Proposals should address all the following aspects:

- Development of an artificial intelligence (AI)-enabled digital twin of traffic and infrastructure. This would integrate historical, current, and forecast data, including crowdsourcing and infrastructure sensors, infrastructure topology and condition, along with environmental (e.g. local weather and visibility) and road and traffic conditions. Such a digital twin can allow monitoring and preventively optimising both safety and traffic flow, equally addressing congestion and resilience issues. Results from existing projects like OMICRON³¹⁶ could be considered. The proposals should also explore the possibility and usefulness of other type of data such as sociodemographic and economic data, behavioural driving data, data from security cameras, among others that could be provided by third parties (tourism, planned events, demand, etc.);
- Analyse in detail the technical challenges associated with the acquisition and use of adequate and reliable big data from multiple sensors in the road transport system, as well as the process of combining these datasets in ways that are meaningful for proactive road safety analysis;
- Develop methods and tools to predict safety-critical traffic situations at quantifiable risk levels based on real-time and historical data;
- Account for biases in the datasets and ensure that the developed AI-based models or algorithms are bias-free, so that the safety of all road users will be improved effectively in a fair, non-discriminatory way;
- Analyse in detail also the non-technical challenges associated with this approach and the inherent need to collect and share large amounts of data that can be used to identify and quantify road safety-related risk factors. Ethical, legal and economic issues should be considered and concepts be developed to overcome these challenges in terms of privacy concerns, questions of data ownership, organisational barriers etc;

³¹⁶ <https://cordis.europa.eu/project/id/955269>

- Analyse what real-time countermeasures can be taken to reduce instantaneous risk levels for all road users complementary to existing Intelligent Transport Systems (ITS) services;
- Demonstrate the feasibility of such risk predictions and targeted interventions;
- Build consensus among relevant stakeholders on possible routes for deployment in coordination with other ITS services.

Particular attention should be dedicated on establishing interoperability standards for data sharing, through the implementation of the FAIR (Findable, Accessible, Interoperable, and Reusable) data principles and leveraging on already adopted practices especially those in the relevant Common European data spaces.

Ways to leverage valuable complementary data, e.g. metadata from crash databases, should also be explored, as well as links to initiatives for European data spaces.

Research is expected to develop recommendations for updates to relevant standards and legal frameworks. International cooperation is advised, in particular with projects or partners from the US, Japan, Singapore and Australia. Knowledge and experience from other modes where similar approaches are followed in much more controlled environments should be leveraged.

HORIZON-CL5-2026-01-D6-15: Icing in the context of sustainable aviation

Call: Cluster 5 Call 01-2026 (WP 2025)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy</p>

Community (2021-2025). ³¹⁷ .

Expected Outcome: The need to perform research in the field of icing, to ensuring safety and efficiency of proposed new solutions (TRL 3-5), is justified by the increasing incidence of weather hazards caused by climate change, the new generation of low carbon dioxide (CO₂) aircraft with associated disruptive configurations, and the stringency of new policies and certification rules.

In the mid-term, project results are expected to contribute to the following outcomes:

- Generating scientific expertise to develop means of compliance for the certification of icing systems;
- Generating scientific knowledge to be able to develop new prototypes of ice detection and protection.

Scope: The field of aircraft icing is of particular importance because it relates to the safety of flight facing adverse weather conditions, which became increasingly extreme during the last decade.

The aviation industry is working to develop clean and sustainable aviation. There is the need to innovate while maintaining safety.

To enable design, validation and future certification of new technologies emerging from cleaner aviation, R&I should be initiated on the following three principal areas (proposals should consider addressing all, or significant areas of all, three areas):

1. R&I to prepare for the development of means of compliance for certification of future sustainable aviation concepts including:

- Development of reliable numerical tools to be used to validate the designs against the icing environment of Appendix C, O, P and snow, including ground anti-icing fluids;
- Development of Supercooled Large Drop (SLD) Testing Capabilities such as icing wind tunnel test or ice tankers. Generation of flight-testing open datasets for validation of modelling and tunnel testing;
- Development of European Ice Crystal test Capability (for engine/air data probe);
- Development of Falling / Blowing Snow Testing Capability.

2. R&I on Icing environment to assess the impact of the climate change effects on the certification icing environments³¹⁸.

³¹⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

3. R&I related to new technologies for Ice detection and protection, including:

- Ice crystal and SLDs Ice Detection systems to optimise Ice crystals protection or support the detect and exit the SLD appendix O or a portion of the appendix O conditions;
- High Efficiency/Low Energy protection: cleaner aviation with more electric airplanes will drive the need for new ice protection technology: more effective and with less energy, active, passive and hybrid technologies (e.g., low ice-adhesion durable coatings and including new air mobility products (e.g., low speed propeller icing concerns);
- Dissimilar means for Air data (angle of attack (AOA)/Speed) measurement and insensitive to icing threat. Air speed and aircraft attitude measurements are crucial for aircraft control. Air data/navigation probes are externally mounted and exposed to adverse conditions. Dissimilar means to determine the aircraft speed and altitude would provide benefits and make the air data system even more robust and fault tolerant to environmental conditions (icing or hail);
- Enhanced aircraft performance and in particular ice protection health monitoring by improving the ice protection system monitoring coverage based on smart systems capable to monitor a large number of aircraft parameters.

This research and innovation topic is linked to several ongoing rulemaking actions of the European Union Aviation Safety Agency:

1. RES.0010 Ice Crystal Detection
2. RES.0017 Icing hazard linked to super cooled large droplets (SLD)
3. RES.0014 Air-data enhanced fault detection and diagnosis
4. RMT.0196 Update of the flight simulation training device requirements
5. RMT.0118 Analysis of on-ground wing contamination effect on take-off performance degradation

A close cooperation with the European Union Aviation Safety Agency (EASA) and with notational aviation authorities during the implementation of this project should be envisioned.

³¹⁸ Note: the project will assess the use of specific models for the prediction of icing conditions (e.g., addressing cloud micro-physics for the formation ice crystals, super cooled water droplets), which can be coupled to climate models (e.g., General Circulation Models).

Other Actions³¹⁹

Grants to identified beneficiaries

1. Support to European Standardisation Organisations for the development of an improved test method for heat pumps

Expected impacts:

This action is necessary and urgent for the EU to be able to use this improved test method in a regulatory context. If this new test method is adopted without asserting the identified knowledge gaps, problem may appear after the new test method has been adopted leading to problems in the enforcement of heat pump ecodesign and energy labelling regulations. Without this action, stakeholders are likely to remain undecided on the test method to be used with the risk of paralysing the regulatory process.

Expected outcomes:

This grant will be awarded to legal entities identified below as it follows up this previous work within the CEN TC113/WG8 in which knowledge gaps were identified. Indeed, before this new test method can be implemented by the EU in a regulatory context, it must be ensured that it is representative (shows realistic performance compared to real life), reproducible and repeatable. In that direction, a Round Robin Test is necessary to validate the method. It is also necessary to identify product subtypes whose control configuration or other characteristics would make it impossible to test with this method.

Scope:

Heat pumping is a key technology for the future of heating in the building sector: heat pumps will supply a sizeable share of the heat to satisfy building needs in the future. Energy efficiency is a key parameter for the uptake of heat pumps and it will also influence future energy demand for heating of buildings. Heat pump energy efficiency is regulated through ecodesign (Regulation (EU) n°813/2013) and energy labelling (Regulation (EU) n°811/2013) regulations. Harmonised standards, which are reliable, accurate, reproducible, and representative of real-life use are important for product energy efficiency regulations to be applied and enforced. In the context of the revision of the previously mentioned regulations, discussions are on-going to improve the present test method. With the present test method, the average energy efficiency (calculated in standard EN14825) is obtained by weighting the results of steady state tests obtained by setting the unit control in specific modes following manufacturer instructions (according test method defined in EN14511-3); it means that the impact of the control of the unit on the energy efficiency is not fully considered and that it cannot be ensured that the set points tested are really part of the normal functioning of the machine. In order to improve the situation, a new and dynamic methodology has been

³¹⁹ The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

proposed, which is known as the load-based testing or compensation method. However, it was never used in a regulatory context, nor in Europe or elsewhere. This method is presently being developed within the CEN TC113/WG8 as part of standard EN14511-3.

Legal entities:

AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH, Giefinggasse 4, 1210 Vienna (Austria)

Viessmann Climate Solutions SE, Viessmannstrasse 1, 35108 Allendorf/Eder (Germany)

BAM, Unter den Eichen 87, 12205 Berlin (Germany)

Building Research Establishment Limited, Bucknalls Lane, Garston, Watford, Herts, WD25 9XX (UK)

CEIS, Ctra. Villaviciosa de Odón a Móstoles, 28935 Móstoles (Madrid) (Spain)

ENGIE Lab CRIGEN, 4 Rue Joséphine Baker, 93240 Stains (France)

Daikin Europe N.V., Zandvoordestraat 300, 8400 Oostende (Belgium)

DAkkS, Am Ohrberg 1, 31860 Emmerthal (Germany)

Danish Technological Institute, Gregersensvej 1, 2630 Taastrup (Denmark)

ECOS, c/o WeWork Rue du Commerce 31 1000 Brussels, Belgium

EdF R&D, Site des Renardières, Avenue des Renardières – Ecuelles, 77818 MORET SUR LOING (FRANCE)

CETIAT, 25 Avenue des Arts, 69100 Villeurbanne (France)

Eurac Research, Drususallee/Viale Druso 1, I-39100 Bozen/Bolzano (Italy)

Fraunhofer ISE, Heidenhofstrasse 2, 79110 Freiburg (Germany)

Groupe Atlantic, 13, Bd Monge - ZI - BP 71 - 69882 MEYZIEU CEDEX (France)

Heating Performance Lab GmbH, Rosberg 24, 52074 Aachen (Germany)

ILK Dresden, Bertolt-Brecht-Allee 20, 01309 Dresden (Germany)

Mitsubishi Electric - ZAC des Hautes Patures Imm Nacarot, 15 rue du 1er mai, 92000 Nanterre (France)

NIBE group, Hannabadsvägen 5, 285 32 Markaryd (Sweden)

Panasonic R&D Center Germany GmbH (PRDCG), Monzastr. 4c, 63225 Langen, Germany

Politecnico di Milano - RELAB Laboratory - Energy Department, Via la Masa 34, 20156 Milano (Italy)

RWTH Aachen University, Mathieustraße 10, 52074 Aachen (Germany)

Universität Stuttgart, IGTE - Prüfstelle HLK, Pfaffenwaldring 6A 70569 Stuttgart (Germany)

University of Gent, Universiteitstraat 4, 9000 Gent (Belgium)

BOSCH Robert Bosch GmbH, Postfach 13 09; 73243 Wernau (Germany)

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: 1st quarter of 2025

Indicative budget: EUR 2.00 million from the 2025 budget

2. Atmospheric monitoring of emission sources of ozone-depleting substances and F-gases

Expected impacts:

Enabling scientific entities that are capable of measuring atmospheric concentrations of substances controlled under the Montreal Protocol, to provide data for further assessments carried by relevant international bodies on their impact on the climate and the stratospheric ozone layer.

Expected outcomes:

- Sustaining and strengthening existing global networks, by closing identified monitoring gaps, using mechanisms established under the Vienna Convention General Trust Fund.
- To identify sites for the monitoring of potential emission sources of controlled substances and provide support to a limited number of monitoring sites to become operational after positive assessment.

Scope:

Whereas the Montreal Protocol has been successful in reducing the release of ozone depleting substances, unexpected increases in emissions, for instance linked to uses in chemical processes, have been recorded through atmospheric sampling. Parties to the Montreal Protocol have asked the scientific community to identify gaps in global coverage of atmospheric monitoring of controlled substances under the Montreal Protocol and to provide options on ways to enhance such monitoring.

Their decision³²⁰ tasks the Multilateral Fund of the Protocol (MLF) to develop a funding modality enhancing atmospheric monitoring, guided by the scientific advice of the Advisory Committee of the General Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention (VCGTF).

The action should support the international efforts on the identification and characterisation of sources of emissions of controlled substances and their local abundance, providing data for subsequent optimisation of measurements of the ozone-depleting substances and F-gases, which may include satellite-based measurements. The latter is challenging due to the very low concentrations of the relevant substances in the atmosphere (parts per billion to parts per trillion).

A grant to UNEP, managing the VCGTF, should strengthen the global monitoring network by providing support for the establishment of additional monitoring capacities at locations that need to be identified. The identification of suitable locations for measurements requires complex modelling of atmospheric circulation patterns and subsequent measurements at potential sites. The envisaged financial support through the MLF would ensure a long-term operation of additional monitoring capacities, enabled by this grant.

The action will identify potential emission sources and pathways, which are not yet fully understood, including how they are released and how they can be best monitored via atmospheric sampling.

The action will support, in at least 3 different locations, in-situ measurements for at least 2 consecutive years. The locations should cover different regions at a global scale that are identified as representing a gap in atmospheric monitoring. The action should also provide support for calibrating new and existing monitoring capacities, to reinforce international networks.

The action should build on the scientific findings presented in this context to the Parties of the Montreal Protocol, including through the “Report of Scientific Assessment Panel to the 11th Meeting of the Ozone Research managers – White Paper - Identification of gaps in the global coverage of atmospheric monitoring of controlled substances and options to enhance such monitoring (2021)” and outcomes of the “Workshop on Costs of atmospheric Monitoring of Gases Controlled under the Montreal Protocol (February 2024)”, and the EU-funded project operated by the UNEP Ozone Secretariat on ‘Regional quantification of emissions of substances controlled under the Montreal Protocol’.

Specific Conditions:

The evaluation committee will be composed fully by representatives of EU institutions.

The beneficiary may provide financial support to third parties. The support to third parties can only be provided in the form of grants (including direct grants where justified). The maximum amount of financial support to third parties is EUR 60,000. However, the amount may be

³²⁰ [cop-13_mop-36_decisions.pdf](#)

higher if achieving the objectives of the action would otherwise be impossible or overly difficult; or, in the case of a direct grant to World Meteorological Organisation (WMO), if the support is duly justified and documented.

Legal entities:

The General Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention (VCTF), administered by UNEP

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: 2nd quarter 2025

Indicative budget: EUR 4.50 million from the 2025 budget

Prizes

1. Renewable energy technology (RET) solutions in energy communities

Individual energy communities encounter different challenges, such as developing a successful governance structure that is sufficiently inclusive and involves different types of actors, carrying out an effective business model and embedding activities within the structure and management of the European Commission to territorial regional and/or local plans (e.g., Just Transition Plans, Climate City Contracts, etc.).

By rewarding Energy Communities' innovative governance structure and management of a RET, the prize aims to inspire other Energy Communities to improve their operations and implementation activities and to foster innovativeness in the compliance of climate goals. In addition, this prize will also serve as inspiration and example to other types of communities to become an energy one, accelerating the pace for the ones that are already being formed/developed.

The prize will showcase the best practices from the awarded communities to other ones experiencing similar challenges and issues, portraying a (replicable) framework on how to address these issues successfully. In this way, communities will feel incentivised to apply these practices, to improve their performance, management, etc., and so they can participate in future (similar) prize calls.

Since Energy Communities have encountered bottlenecks in terms of management, governance structure, provision of other services, etc., this prize will aid to portray the

successful ones on how to develop/carry out a fruitful business model that includes and promotes different type of services, while including and improving social aspects within the community.

While showcasing governance innovativeness within the common barriers encountered to operate, the awarded communities will present a clear example that can serve as a replicable framework for other communities on how to overcome challenges and barriers, and address encountered common bottlenecks.

Furthermore, the prize is expected to contribute to the broader goals of the EU Mission on Climate-Neutral and Smart Cities by demonstrating how energy communities can play a pivotal role in achieving climate neutrality at the city level. By embedding their activities within existing strategic and systematic approaches towards climate neutrality, such as the Climate City Contracts, these communities will help cities transition to more sustainable and resilient urban environments.

The total money allocated to this prize is €1 million (EUR 1.000.000) to be awarded up to 10 winners as follows:

- 1st place: €350.000
- 2nd place: €200.000
- 3rd place: €100.000
- 4th place to tenth place: €50.000

Essential award criteria: Prizes will be awarded, after closure of the contest, to the applicants that in the opinion of the Jury demonstrates excellence within their governance structure in the following criteria:

1. Inclusivity of the governance structure: Addressing the issues of gender balance, membership diversity and solution to inequalities
2. Internal governance processes: Covering the aspects of innovative financing, mechanisms for representative governance, members participation and engagement with local authorities
3. Regional/local approach: links into territorial plans, activities related to regional policies
4. Other innovative approaches; efforts to integrate the energy community to the broader energy system, alignment with local sustainable energy and climate action plans or other relevant environmental related plans and cost saving initiatives.

Eligibility criteria: The contest will be open to all Energy Communities that fall into the definitions and concepts of the Energy Communities Repository, which identifies renewable Energy Communities and Citizen Energy Communities as defined in the [Renewable Energy Directive](#) and in the [Internal Electricity Market Directive](#). Under EU law, energy communities

can take the form of any legal entity including an association, a cooperative, a partnership, a non-profit organisation or a limited liability company”. In addition, only energy communities with up to 10,000 members at the time of the submission will be eligible.

Indicative timetable of contest(s):

Stages	Date and time or indicative period
Opening of the contest	3rd quarter 2025
Deadline for submission of application	3rd quarter 2026
Award of the prize	1st quarter 2027

Form of Funding: Prizes

Type of Action: Recognition Prize

Indicative budget: EUR 1.00 million from the 2025 budget

Public procurements

1. Technical support for low carbon and renewables policy development and implementation

This action aims at providing technical support for the development and implementation of policies related to low carbon and renewable energy. The main base will be the recast of the renewables directive 2018/2001 and the associated actions linked to the implementation of the revised Renewable Energy Directive (EU) 2023/2413. It will also address policy development for the implementation of the Industrial Carbon Management strategy (COM/2024/62 final)³²¹ and the hydrogen and decarbonised gas market package (Directive (EU) 2024/1788³²² and Regulation (EU) 2024/1789³²³).

This would include studies on sustainability, certification, climate impacts, industry competitiveness, consumer information, and facilitation of standardisation. Furthermore, communication activities that enable stakeholder engagement can be undertaken.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: 1st quarter and 3rd quarter of 2025

Indicative budget: EUR 1.00 million from the 2025 budget

³²¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2024%3A62%3AFIN&qid=1707312980822>

³²² https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401788

³²³ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401789

2. Industrial Carbon Management knowledge sharing platform

A growing number of carbon capture, utilisation and storage (CCUS) projects are on track to become operational before 2030. The Communication on Industrial Carbon Management³²⁴ emphasises the importance of aggregating these industrial-scale projects into a knowledge-sharing platform to facilitate the collection of and information on best practices between CCUS projects in the EU. This procurement is expected to establish and operate an open collaboration and knowledge sharing platform, providing data and up-to-date information about the entire CCUS sector, based on the collection of primary data from current and future large-scale demonstration projects.

The knowledge sharing platform will be open to all projects (at industrial scale, but also larger research and pilot demonstrations) that are ready to share information and cooperate without disclosing commercially sensitive information and in full compliance with single market competition rules. Depending on the type of project, the knowledge sharing platform must collect and display data on deployed technologies and storage site characteristics as well as best practices from the projects, such as project governance (including management of interphases and risks, involvement of operating organisation of facility³²⁵), barriers and success factors, needs for standards, access to funding, stakeholder management, regulatory aspects and permitting issues. It will also cover lessons learned on public engagement and on sharing best practice of dialogues between project developers, local and national authorities. The data and information must be displayed in a user-friendly way in order to be easily accessed by industry stakeholders, managing authorities, policymakers, researchers and citizens.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: 2nd quarter 2025

Indicative budget: EUR 3.00 million from the 2025 budget

3. Alignment of national and regional priorities with co-programmed partnership in the road mobility sector of the future

The action is aimed at supporting national and regional coordination with European co-programmed partnership in establishing connections and synergies with national and regional research funding systems, therefore leveraging complementarities for a better integration of innovative and zero-emission road transport solutions.

³²⁴ <https://ccsnorway.com/sharing-important-learning-from-building-a-ccs-facility-in-an-operating-plant/>
https://energy.ec.europa.eu/document/download/6b89e732-fea4-480b-9d2e-cf64de90247e_en?filename=Communication_-_Industrial_Carbon_Management.pdf

³²⁵ <https://ccsnorway.com/sharing-important-learning-from-building-a-ccs-facility-in-an-operating-plant/>
https://energy.ec.europa.eu/document/download/6b89e732-fea4-480b-9d2e-cf64de90247e_en?filename=Communication_-_Industrial_Carbon_Management.pdf

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: 1st quarter 2025

Indicative budget: EUR 1.00 million from the 2025 budget

4. Support to the development, implementation, monitoring and evaluation of climate, energy and mobility research and innovation policy activities

The action focusses on three types of activities:

- Technical assistance, and economic and policy analysis to support various aspects of the research and innovation policy relevant in climate, energy and mobility and related sectors;
- Communication activities, such as events and publications, that could support dissemination of knowledge and information to interested organisations and individuals, as well as development of new forms of cooperation and information exchange between interested organisations and individuals;
- Provision of information on new forms of innovation in the climate, energy, and mobility sectors, as well as new forms of supporting innovation, e.g., start-up support, new business models, new financing instruments, cooperation with organisations outside the climate, energy and mobility sectors, supporting innovation investment communities and intermediaries.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: as of 1st quarter 2025

Indicative budget: EUR 1.00 million from the 2025 budget

5. Dissemination and information activities

Communication activities such as meetings, conferences, out-reach communication events/papers/materials and publications should support dissemination of knowledge and information to relevant stakeholders.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: as of 1st quarter in 2025

Indicative budget: EUR 0.80 million from the 2025 budget

6. Support to cities to enable deployment of innovative sustainable air mobility services

The Urban Mobility Framework, adopted in December 2021, recognises Urban Air Mobility (UAM) as an emerging transport and mobility service. Several barriers remain to ensure an uptake of this new mode of transport, e.g., the preparation of cities and local authorities. This action is intended to support cities in their endeavour to introduce Innovative Aerial Services (IAS) in line with the goals of the Drone Strategy 2.0³²⁶:

- Number of cities/regions that will be served by IAM regular commercial services (Target for 2030: at least 45 in the EU and at least one per Member State)
- Number of Member States where emergency health services (medical samples, defibrillators, air ambulances) will be provided using drones (Target: services used in at least 20 Member States)

This action intends to:

- Prepare cities for Urban Air Mobility (UAM) to become a part future urban multimodal intelligent mobility ecosystem;
- Increase societal acceptance of new IAM services.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: as of 3rd quarter in 2025

Indicative budget: EUR 0.50 million from the 2025 budget

7. Organisational support to the SET Plan Conferences

Support for the preparation and organisation of the annual SET Plan conferences in 2026, 2027 and 2028 under the respective Presidencies of the Council of the European Union.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: as of 3rd quarter in 2025

Indicative budget: EUR 1.20 million from the 2025 budget

³²⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022DC0652>

Indirectly managed actions

1. Contribution to InvestEU blending operation under the Green Transition product

The ‘Fit for 55’ package of measures adopted by the Commission in July 2021 sets out the policies and legislation for the EU to meet its 2030 target of 55% net greenhouse gas emissions reductions, which will create new opportunities for investment in new technologies and approaches. The final aim is decarbonising the economy in line with the objectives of the Paris Agreement, the European Green Deal and the European Union’s 2050 net-zero target, and Climate Law. That is why the European Commission intends to establish an efficient framework to identify European projects deploying innovative technologies, business models and approaches to reduce the green premium – the difference between the price of a carbon-emitting technology and its clean alternative. Under existing initiatives, the Commission has already been supporting, under InnovFin and other EU programmes, a variety of technological pathways for decarbonisation. InnovFin Energy Demonstration Projects³²⁷, in particular, has been very effective at mobilising finance for first-of-a-kind projects in the area of innovative renewable energy production, storage and smart grids. It has mobilised so far EUR 346 million of EU support for 11 operations (with total project costs of EUR 864 million).

The blending operation will target projects at TRLs 6-8 via the European Investment Bank (EIB) or other implementing partners’ financial instruments, by providing loans and quasi-equity (or a combination of both), which may be blended with non-reimbursable components. The financial instrument component of operations may draw from the Innovation Fund, this Horizon Europe action, or the InvestEU budget, while the non-reimbursable component will only be funded by this Horizon Europe action – to be spent economically as a last resort option to enable project’s financial closure.

The blending under the InvestEU’s Green Transition product focusses on the following four areas that are underrepresented in the current portfolio of InnovFin:

- *Renewable hydrogen.* In July 2020, the Commission adopted the Hydrogen Strategy³²⁸ with the aim of decarbonising its production and to expand its use to store, transport and accelerate the use of renewable energy, as well as replacing fossil fuels in specific sectors, aiming to reach 40 GW of electrolyser capacity by 2030, producing up to 10 million tonnes of renewable hydrogen. Investments in renewable hydrogen production capacity are estimated at EUR 180-470 billion in the EU until 2050. The strategy identifies as a clear priority the production of renewable hydrogen, i.e. hydrogen produced through electrolysis using renewable electricity. In this context, a top priority is to demonstrate larger size, more efficient and cost-effective electrolyzers, with capacities reaching 100 MW and above. Another priority is to further develop large scale hydrogen end-use applications, notably in industry. The path to business case feasibility (without any grant component) of the solution at potential replication sites shall also be

³²⁷ <https://www.eib.org/en/products/mandates-partnerships/innovfin/products/energy-demo-projects.htm>
³²⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0301>

investigated. The necessary coordination, along the value chain with the European Clean Hydrogen Alliance³²⁹, and on data and knowledge with the observatory and data base in the Clean Hydrogen Joint Undertaking, is foreseen.

- *Sustainable aviation fuels (SAF)*. Though aviation accounted for only 3.7% of total CO₂ emissions in the EU in 2018, it accounted for 15.7% of CO₂ transport emissions. Reducing aviation emissions is challenging considering the long operational life of aircraft and the fact that that zero-emission aircraft configurations and powertrain options for commercial air transport are far from technological and commercial maturity. SAF can significantly reduce aviation reliance on fossil fuels, while relying on existing infrastructure and propulsion systems, but the transition will require significant investments. While several SAF production pathways are certified, their use in the fuel mix is still very low due to high production costs. The price of the most innovative and sustainable types of fuels is on average estimated at up to 3 to 6 times the price of fossil aviation fuels depending on the production pathway, while their lifecycle emissions savings are 85% or more compared to fossil fuels. The path to business case feasibility (without any grant component) of the solutions at potential replication sites shall also be investigated as well as sustainability in wider scale as part of the Fit-for-55 package. The EU has therefore adopted the ReFuelEU Aviation³³⁰ to boost the supply and use of sustainable aviation fuels in the EU. The action will support the development of the most innovative SAF notably advanced biofuels and RFNBOs³³¹ in line with the ReFuelEU Aviation and Renewable Energy Directive sustainability framework.
- *Long duration energy storage (LDES)*. At any moment in time, electricity consumption and generation have to be perfectly matched. This balance is necessary not only in the short term for power grid stabilisation (for which short duration storage solutions exist), but also over the long term, to ensure supply adequacy, by compensating for fluctuations, for meteorological dark and still periods ('dunkelflaute') that can last a few weeks, and for seasonal variations between summer and winter. Long duration – weekly to seasonal - renewable grid scale energy storage needs will expand as both the electrification of demand and the share of renewable – and variable as well as distributed - energy sources in the total supply mix will grow. Sustainable long duration energy storage therefore has a key role to play in the transition towards a carbon-neutral economy. The storage system needs to be optimised for large capacity and long duration (weekly, seasonal), for minimal climate and environmental footprint over the full life cycle, for regulatory compliance and for financial viability (hence maximising round trip efficiency, minimising costs and identifying a business case for the targeted investment based on electricity storing / de-stocking price projections). The path to business case feasibility (without any grant component) of the storage solution at potential replication sites shall also be investigated. Sustainable storage solutions for renewable energy, involving an energy vector that can be used for other purposes than regenerating

³²⁹ https://ec.europa.eu/growth/industry/policy/european-clean-hydrogen-alliance_en

³³⁰ Regulation (EU) 2023/2405 of the European Parliament and of the Council of 18 October 2023 on ensuring a level playing field for sustainable air transport (ReFuelEU Aviation))

³³¹ Renewable Fuels of Non Biological Origin (RFNBOs) as defined under RED II.

electricity are also eligible. The topic is open to all technologies: chemical (including hydrogen and its derivatives), electrochemical, thermal and mechanical technologies (other than pumped hydro which is mature and available commercially).

- *Direct air capture (DAC) of CO₂*. European Commission scenarios reaching net-zero emission by 2050 show extensive use of carbon dioxide removal, including DAC. For example, the 1.5 tech scenario forecasts 266 Mt of CO₂ point capture and 200 Mt of CO₂ DAC. Most IPCC scenarios modelling 1.5°C paths also include a share of carbon dioxide removal (with and without DAC). DAC emerges as the most relevant source of carbon for renewable power-to-fuels/chemicals processes in such scenarios, but several challenges remain for a large-scale deployment of the technology. The future operational and financial viability (without any grant component or support scheme) of any DAC solution at potential replication sites shall also be investigated in function of the fate of the captured CO₂ (i.e. underground storage or use), renewable energy source used for the capture process, and vicinity to CO₂ transport and storage infrastructure (in case of underground storage). The International Energy Agency estimates the current DAC cost to be within a wide range of \$100-\$1000 per captured tonne of CO₂. Stakeholders claim that costs can be reduced to €50-€100 by 2030 with sufficient investments in R&I and deployment. As there is so far no specific EU initiative targeting DAC, this topic will fill an important gap.
- *Decarbonisation of Industry (steel and cement)*. Rapid innovation is needed to bring to market clean technologies for those parts of the energy system where emissions are harder to address, in particular carbon intensive industries (e.g. steel, cement, chemicals, aluminium, ceramics). Carbon capture, utilisation and storage (CCUS) will play an important role in mitigating those hard-to-abate process emissions. In March 2023 the European Commission introduced the Net Zero Industry Act, which identifies CCUS as a strategic net zero technology for which scaling up of manufacturing capacity is critical to reaching the EU's climate goals. Specifically, the Act proposes to set an EU-wide goal to achieve an annual CO₂ injection capacity of 50 Mt by 2030, with oil and gas producers asked to contribute, in addition to setting clear timelines for permitting CCUS projects. While CCUS technologies have been demonstrated in various settings and on certain scales, it is still a challenge to scale up these technologies for widespread use, understand their performance and requirements and develop the best models for their deployment. This is due to factors such as energy efficiency, cost of capture technologies, and the technical feasibility of transporting and storing large volumes of CO₂.

Functioning of the blending operation agreement

The blending operation will be open to all applicants meeting the set eligibility criteria set in this text and InvestEU Green Transition product. As such, it is not restricted to projects proposed under pre-existing or future partnerships with the European Commission. This blending operation is particularly relevant because it seeks to bring together the public and private sector to fund pre-commercial, industry-scale demonstration projects for critical

decarbonisation technologies, directly addressing the early deployment funding gap for the selected technologies and provide a structure to accelerate their commercialisation.

Projects' selection and financing procedure follows the InvestEU Regulation. In particular, the EIB or other implementing partners will check the financial viability of and perform full due diligence on each potential financing operation, while the Commission services assure their eligibility under the 'policy check' procedure. Special attention shall be paid to ensuring that the technologies developed, and Intellectual Property generated will benefit the EU interest, in particular by focussing the funds on high quality projects realised in the Union/eligible Associated Countries.

Expected impact

Unprecedented investment is needed to turn climate policy targets into reality. Attaining the 2030 target of at least 55% net emissions reduction is estimated to require EUR 350 billion of additional annual investment. Blended finance is a crucial tool to mobilise urgently needed private 'patient capital,' especially in domains considered too risky for the markets to function. This is the case of the technologies selected, which will benefit from investments in demonstration and scaling-up – leading to increased confidence among market participants, economies of scale in production and deployment, and significant cost reductions. The project pipeline of the InnovFin EDP and FutureMobility facility, as well as the high number of submitted proposals under the first Innovation Fund calls, indicate the richness of the EU ecosystem, which - boosted by the Fit-for-55 package - is expected to thrive in the coming years. The initiative will accelerate the reduction of the green premium in key areas, allow for wider, faster up-take and contribute to the creation of jobs in the EU in green industries manufacturing these solutions.

Legal entities:

European Investment Bank (EIB), 98-100, boulevard Konrad Adenauer, L-2950 Luxembourg, Luxembourg

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative timetable: as of 1st quarter 2025

Indicative budget: EUR 50.00 million from the 2025 budget

2. Voluntary contribution to the IEA's Clean Energy Transitions Programme (CETP)

The International Energy Agency's (IEA) Clean Energy Transitions Programme (CETP) turns targets into action, working to accelerate progress towards the goal of global net zero emissions through secure and people-centred clean energy transitions, with a focus on major emerging and developing economies. Drawing on the IEA's recognised expertise, this programme assists the target countries in overcoming the energy technology and policy challenges of moving towards the implementation of the Paris Climate Agreement. In 2022, at

the IEA's Ministerial Meeting, 15 IEA member countries and the European Commission expressed their support to the CETP, with the goal of accelerating the global transition to net zero emissions.

The CETP delivers collaborative action across three areas: 1. Accelerating national transitions (supporting emerging and developing economies to develop and implement timely strategies for achieving national clean energy transition goals); 2. Strengthening multilateral coordination (facilitating international collaboration to scale up innovation and deployment of clean energy sources and technologies); 3. Informing global energy dialogue (developing greater international understanding of barriers and environmentally sustainable solutions for the development and deployment of clean energy technologies).

This Contribution Agreement will be awarded to the legal entity identified below as it contributes directly and significantly to the external dimension of the EU Green Deal and the Paris Climate Agreement and can leverage IEA's unique clean energy expertise and recognition in major emerging economies.

Scope

The new three-year CETP project will build on the outcomes of the previous and current CETP activities funded by the European Union. It will deepen and extend work in at least three of the following areas: (1) reducing investment risk and improving the cost of capital and financing options in priority countries; (2) strengthening the global landscape of clean energy innovation; (3) expanding analysis and modelling to empower policymakers, regulators and system operators in priority countries with regard to clean energy policy design and implementation; (4) strengthening the quality and accessibility of official government data and statistics. Additional activities can be developed in response to changes in the global clean energy landscape.

The involvement of the European Commission, including its delegations in priority countries, should be sought throughout the implementation of the project as appropriate.

The project duration is expected to be 3 years.

Expected impact

The project will provide for more effective knowledge and information sharing, increase collaboration between experts across priority countries and make available relevant global expertise for priority countries, strengthening domestic policy action as well as international collaboration. As such, it will contribute to the implementation of the priority countries' nationally determined contributions (NDCs) under the Paris Climate Agreement, as well as to the objectives of the EU external energy policy, in particular what regards to accelerating the global green and just energy transitions.

Legal entities:

Organisation of Economic Cooperation and Development (International Energy Agency),
OECD, rue André-Pascal 2, PARIS CEDEX 16 75775

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative timetable: 4th quarter 2025

Indicative budget: EUR 3.00 million from the 2025 budget

3. Voluntary contribution to the IEA for research and analysis supportive of the implementation of REpowerEU

Expected impact:

Ensuring more sustainable, secure and competitive energy supply through solutions for smart energy systems based on renewable energy solutions.

Expected outcome:

The IEA will provide the Commission with research, data, advice, analysis, workshop and peer review support and written contributions on a range of energy topics supporting the implementation of the REpowerEU plan.

Scope:

IEA will provide research, data, advice, analysis, workshop and peer review support and written contributions on the diversification away from Russian fuels and the development of better energy efficiency measures and renewable energy resources, with a view to researching ways to support the competitiveness of European industry whilst decarbonising increasing electrification, and accelerating the deployment of renewables and innovative and clean energy technologies. All fuels need to be monitored to build decarbonisation and non-Russian supply scenarios.

This Contribution Agreement will be awarded to the legal entity identified below as it contributes directly and significantly to the EU Green Deal and Clean Industrial Deal and can leverage IEA's unique clean energy expertise and research in providing analysis and policy advice as the EU implements the REpowerEU programme.

Legal entities:

Organisation of Economic Cooperation and Development (International Energy Agency) -
OECD, rue André-Pascal 2, PARIS CEDEX 16 75775

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative timetable: 1st quarter 2025

Indicative budget: EUR 0.40 million from the 2025 budget

4. Strengthening international policy dialogue to address global challenges: the contribution of transport research & innovation

Expected impacts:

Achieving sustainable and competitive transport modes, as well as multimodal systems and services for climate-neutral, smart and safe mobility.

Expected outcomes:

In line with the “Administrative arrangement between the European Commission and the Organisation for Economic Co-operation and Development (OECD) for cooperation in the domain of science, technology and innovation policies”, the work, led by the International Transport Forum, an OECD body, in cooperation with the European Commission, aims at:

- Providing fora for EU member states, OECD member countries and all key transport stakeholders to identify transport R&I priorities of common interest, addressing technological, societal, and behavioural aspects to promote the development of sustainable and smart transport systems and infrastructure, as well as to support a socially fair transition towards such connected, integrated, accessible, environmental-friendly and safe transport and mobility for all;
- Supporting the development and uptake of innovative, sustainable and competitive transport and mobility solutions by developing concrete policy proposals relevant for the local, national or international level, with a particular focus on policies and technologies that improve energy efficiency and reductions in CO₂ and local pollution from transport; economic and technological analysis of different solutions to decarbonise hard to abate transport sectors, in particular aviation, maritime and transport from heavy duty vehicles.
- Creating a favourable environment for the implementation of sustainable and inclusive transport policies, by bridging knowledge gaps, addressing skills and labour shortages, and enhancing cooperation across different sectors relevant for the development of sustainable transport systems (e.g. energy, trade and finance).

Scope:

Through transport R&I diplomacy, addressing global challenges and the Sustainable Development Goals (SDGs), the work will engage, on a voluntary basis, a number of regions, countries, cities, corporations and academia and think tanks. The stakeholder fora, supported by research inputs, will further the (understanding of the) evidence-base for transport mitigation and/or adaptation measures relevant for countries' Nationally Determined Contributions (NDCs), and will help countries meet their targets as set out in these commitments.

The work will support the development of an international coalition for effective climate change policy implementation in the transport sector, building on earlier efforts and introducing new approaches to policy making, as well as the development of a sustainable, smart and inclusive transport and mobility solutions for all, especially for hard to abate transport sectors like aviation, maritime and long haul road transport (heavy duty vehicles) where we still need to make focus on the most promising technologies.

Legal entities:

Organisation for Economic Co-operation and Development (OECD), , 2, rue André Pascal
75016 – Paris – FRANCE

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative timetable: Q3 of 2025

Indicative budget: EUR 1.00 million from the 2025 budget

Subscriptions

1. Contribution to Technology Collaboration Programmes (TCPs) of the International Energy Agency (IEA)

The Commission represents the European Union in the Technology Collaboration Programmes (TCPs) concluded under the framework of the International Energy Agency where it participates in activities in certain areas of energy research. The annual financial contributions will be paid to the entities responsible for managing the TCPs in which the Commission represents the European Union:

- Geothermal Energy Research and Technology;
- Bioenergy;
- Ocean Energy Systems (OES TCP);
- International Smart Grids Action Network (ISGAN TCP)
- Greenhouse Gas Research & Development;
- Concentrating Solar Power, Thermal and Chemical Energy Systems (SolarPaces TCP)
- Photovoltaic Power Systems (PVPS TCP);
- Solar Heating and Cooling (SHC TCP);
- Hydrogen;
- Hydropower

- Wind Energy Systems;
- Energy Efficient End-Use Equipment (4E TCP);
- Equality in Energy Transitions;
- Hybrid and Electric Vehicle Technology Collaboration Programme (HEV TCP).

Type of Action: Subscription action

Indicative timetable: 1st quarter 2025

Indicative budget: EUR 0.50 million from the 2025 budget

2. Contribution to the International Renewable Energy Agency (IRENA)

The European Union is a member of IRENA. According to the organisation's Statute and Financial Regulation this implies the obligation to pay an annual contribution to its budget covering the participation of the EU in IRENA's activities. In addition to its annual contribution, the EU supports Ukraine's membership in IRENA by a voluntary contribution, covering Ukraine's annual contributions on hold since the Russian invasion. IRENA's main objective is to disseminate best practices in the field of renewables as the principal platform for international cooperation in the field, a centre of excellence on renewable energy and a repository of policy, technology, resource, and financial knowledge. This includes:

- The promotion of the widespread and increased adoption and the sustainable use of all forms of renewable energy globally, including in the EU, in particular to bring down costs and also to increase market experience, in order to contribute to economic growth and social cohesion as well as access to and security of energy supply;
- Support activities for countries in their transition to a renewable energy future;
- Reducing of barriers for renewable energy, stimulating best practice and raising awareness.

Type of Action: Subscription action

Indicative timetable: 1st quarter 2025

Indicative budget: EUR 0.60 million from the 2025 budget

3. Voluntary contribution 2025 to the Secretariat of the Clean Energy Ministerial (CEM) for Phase IV (July 2025 – June 2028), as well as to participation in its workstreams

The Clean Energy Ministerial (CEM) is a high-level global forum to promote policies and programmes that advance clean energy technology, to share lessons learned and best practices, and to encourage the transition to a global clean energy economy. Initiatives are based on areas of common interest among participating governments and other stakeholders.

It serves as a platform where its members help shape the global clean energy agenda and advance the deployment of specific clean energy technologies and solutions; a bottom-up, government-led community for exchanging knowledge and insights; an implementation vehicle that helps its members to achieve specific domestic clean energy objectives.

The Commission has been active in the CEM since its inception in 2010, with the European Union officially becoming member on 6 June 2016, following the formal endorsement of the CEM Framework by EU Energy Ministers.

The CEM Framework established a multilateral CEM Secretariat to facilitate the long-term engagement of all CEM Members in the work. The secretariat is hosted at the International Energy Agency (IEA) under an "Administrative Arrangement" between the IEA and the CEM Members. In order to provide "adequate and predictable financial resources" for the CEM Secretariat, CEM Members provide voluntary contributions on an annual or multi-annual basis.

The Commission supports the extension of the CEM mandate to Phase IV (from July 2025 to June 2028) and intends to provide voluntary contribution for its Secretariat as well as for the specific workstreams it co-leads: the Super-efficient Equipment and Appliance Deployment (SEAD) initiative (50.000 EUR/year), the Hydrogen initiative (20.000 EUR/year) and the Supercharging Battery Storage (SBS) initiative (50.000 EUR/year).

Type of Action: Subscription action

Indicative timetable: as of 1st quarter 2025

Indicative budget: EUR 0.72 million from the 2025 budget

4. Contribution to the International Energy Agency (IEA) – Energy Efficiency Hub (EE HUB)

The purpose of the International Partnership for Energy Efficiency Cooperation (IPEEC) is to strengthen international cooperation on energy efficiency. The action carried out under the auspices of the partnership should result in more effective energy policy and programme output, in best practices being more widely known, disseminated, and applied and in economies of scale. The aim of the partnership is to offer a topic-driven, structured dialogue and an operational network for enhanced cooperation and exchanges on energy efficiency between countries and international organisations by:

- exchanging information and experience on development of regulatory measures, policies and programmes;
- developing benchmarks and sharing information on goods and services, along with measurement methods regarding energy performance and energy savings;
- strengthening information, education and training for energy consumers;

- building stakeholder capacity by improving contacts between national, regional, and local authorities and other relevant partners and stakeholders, exchanging views, and sharing knowledge and experience.

Type of Action: Subscription action

Indicative timetable: 1st quarter 2025

Indicative budget: EUR 0.08 million from the 2025 budget

5. Voluntary contribution to the Mission Innovation Secretariat, hosted by the International Energy Agency

Mission Innovation is a global platform bringing together 23 countries and the European Commission (on behalf of the EU), launched at COP21 in 2015, with the aim to accelerate efforts in clean energy globally. Its goal is to both stimulate political action and attract investments on research, demonstration, and development to make clean energy technologies more attractive, affordable, and accessible to all.

Mission Innovation (MI) is entirely voluntary, a free commitment of countries, international organizations and industry, that are all welcome to collaborate and provide support to its workstreams according to their own strategic priorities. MI members represent over 95% of global government investments in clean energy research and innovation.

In 2021, MI has reached the end of its first phase of five years, in which its members have successfully stimulated global efforts, increasing annual investments by more than USD 5.8 billion and developing over 70 new international collaborations (worth USD 1.4 billion) in clean energy through joint calls, demonstration projects, and student and researcher exchanges. If 1000 innovations delivered by MI members were fully deployed, they could avoid emission of over 12 Gigatons of CO₂ per year until 2030.

MI 2.0, launched in June 2021, concentrates on seven impact-oriented, public-private missions, with ambitious goals that accelerate the pathway towards the Paris Agreement goals and net zero. Namely they focus on: clean hydrogen, urban transitions, zero-emission shipping, net-zero industries, green power, integrated biorefineries and carbon dioxide removal.

The Commission currently plays a key leadership role in Mission Innovation, by (co-) leading two missions, through its contribution to the governance of Mission Innovation and by delivering the Chair of the MI Steering Committee.

As of September 2025, the Secretariat of Mission Innovation will be hosted by the International Energy Agency. While continuing to be a member driven initiative, the allocation of the Secretariat to the IEA will allow the multilateral platform to receive financial contributions from its Member States. At the MI Steering Committee meeting on 30 October 2024, Members have expressed their support to the new Hosting arrangement and provided indication of financial commitment to the Mission Innovation Secretariat.

Type of Action: Subscription action

Indicative timetable: 2nd quarter 2025

Indicative budget: EUR 0.30 million from the 2025 budget

Scientific and technical services by the Joint Research Centre

1. Support for the transition towards CCAM

This action aims at providing scientific and technical support from the JRC to EU policies related to the transition towards Connected, Cooperative and Automated Mobility (CCAM) in road transportation. Activities will be coordinated with the European players in this domain such as the CCAM Partnerships and other relevant stakeholders.

Type of Action: Provision of technical/scientific services by the Joint Research Centre

Indicative timetable: 3rd quarter 2025

Indicative budget: EUR 0.50 million from the 2025 budget

2. Administrative Agreement with the JRC on EU & International Greenhouse Gas Emissions Modelling

This action aims at conducting research and providing analytical support to the implementation of the climate policies within the European Green Deal and on future EU policy initiatives for the post-2030 policy framework in view of reaching the EU's climate neutrality objective by 2050.

The action will build on a set of modelling tools developed and maintained by JRC (including but not necessarily limited to POLES-JRC, POTEnCIA and JRC-GEM-E3), which ensures a full coverage of global GHG emissions' monitoring, allows to identify the role of carbon removals, and helps in understanding and analysing the socio-economic aspects of the clean transition. The action will cover the further development and deployment of such tools, where relevant, to address new policy research questions.

Furthermore, the action aims to support research and related outreach with counterparts in third countries (particularly in major emitting economies outside the EU and least developed countries) with a view to promote the use of economic analysis tools in policy preparation, build capacity and strengthen the interface between economic modelling research – relevant for climate policy – and policy making in these countries.

Type of Action: Provision of technical/scientific services by the Joint Research Centre

Indicative timetable: 3rd Quarter 2025

Indicative budget: EUR 2.25 million from the 2025 budget

3. Technical and scientific assistance for the Energy Efficiency Directive (EED) and the Energy Performance of Buildings Directive (EPBD)

The JRC should provide technical and scientific assistance to enable the European Commission to meet its obligations on the EU energy efficiency legislative framework, most notably the Governance Regulation, the Energy Efficiency Directive (EED), the Energy Performance of Buildings Directive (EPBD), the Ecodesign Directive and the Energy Labelling Regulation.

The main components of the work to be carried out are divided into four work packages. The work packages and the necessary tasks and deliverables are:

- WP 1 - Support to the implementation of the Governance Regulation with regards to Energy Efficiency related dimension including buildings;
- WP 2 - Support to the implementation of EU Energy Efficiency legislation currently in force including energy performance of buildings and products;
- WP 3 - Collecting, processing, and analysing relevant data to properly assess complex technical, environmental, economic, and social aspects of energy efficiency including energy performance of buildings and products;
- WP 4 - Technical and scientific support to the review of EU Energy Efficiency legislation including energy performance of buildings and products, with a focus on financing.

Type of Action: Provision of technical/scientific services by the Joint Research Centre

Indicative timetable: 2nd quarter of 2025

Indicative budget: EUR 1.00 million from the 2025 budget

4. Advancing of the TEN-T alternative fuels infrastructure analyses to support research and policy

Detailed, timely and reliable information on the progression from research to deployment is essential for further research, evidence-based policy and decision making. In particular, with the adoption of the 'Fit for 55' package, including the Alternative Fuels Infrastructure Regulation (AFIR), the revised TEN-T regulation and other relevant initiatives, information on alternative fuels infrastructure deployment and identified gaps in the transport network is crucial to monitor and to support the uptake of innovative solutions for sustainable transport. Enhanced mapping and data visualisation of the alternative fuels infrastructure network can also facilitate investments in research and innovation by private stakeholders. Valuable information is becoming increasingly available, for instance through the European Alternative Fuels Observatory (EAFO) and the analyses performed in TENtec. However, additional data and analyses are needed to develop and enhance comprehensive algorithms that consider routing, and perform an in-depth, comprehensive assessment of alternative fuels network

coverage on the TEN-T network. The development and integration of new thematic data layers into TENtec will also foster new analyses and research into the opportunities and effects of EU policies on alternative fuels.

Type of Action: Provision of technical/scientific services by the Joint Research Centre

Indicative timetable: 2nd quarter of 2025

Indicative budget: EUR 0.30 million from the 2025 budget

5. Contribution to JRC activities on the development and implementation of innovative tools for detecting structural deficiencies of bridges and tunnels in the TEN-T network

Bridges and tunnels in the TEN-T network present structural deficiencies or are reaching the end of their design life. Ensuring that our transport system is truly resilient against future crises and climate events is a key objective of EU's transport policy. The project will categorise the TEN-T tunnels and bridges according to their state (e.g. very good, good, mediocre, bad, very bad) and develop tools to prioritise expensive interventions, in a general situation of tight budgets and supporting administrations in planning and decision-making. The project will valorise research output on infrastructure management and maintenance (making sense of data, methods and deployment in practice), as well as identify and streamline future research, align with sector needs, avoid duplication and target application.

Type of Action: Provision of technical/scientific services by the Joint Research Centre

Indicative timetable: 2nd quarter of 2025

Indicative budget: EUR 0.50 million from the 2025 budget

Expert contract actions

1. External expertise to advise on EU research and innovation policy

This action will support the provision of independent expertise in support of the design, implementation, and valorisation of EU research policy. Individual experts will work in the following domains:

- Analysis, design, assessment and implementation of strategic climate, energy and mobility research and technology options and actions;
- Future climate, energy, and mobility -related research actions and programmes, contribution to their impact assessment;
- International cooperation in the field of climate, energy and mobility research and innovation;
- Analysis and valorisation of EU climate, energy and mobility research results in view of contributing to the elaboration of policy reports (such as projects for policy, project cluster reports, etc.);

- Preparation of actions for Horizon Europe missions.

The tasks of individual experts would include:

- Analysis of the contribution of the funded research to the EU policy objectives spanning across all climate, energy and mobility modes and systems;
- Analysis of the state-of-the-art at international level; investigation of deployment options for the developed knowledge;
- Participation in international symposia, including the drafting of White Papers and reports on the symposia's conclusions;
- Advise the Commission on promising technologies covered by European and nationally funded projects and on ways to stimulate synergies;
- Assist the Commission in the evaluation of calls for expression of interest.

In addition to individual experts, this action could provide for Commission expert groups.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative timetable: As of 1st quarter 2025

Indicative budget: EUR 0.50 million from the 2025 budget

Service level agreements

1. Contribution to DIGIT for hosting website fees for BRIDGE and ETIP SNET web presence

The ETIP Smart Networks for Energy Transition (SNET) is one of the ETIPs set up by European Commission as part of the SET-Plan and is guiding Research, Development & Innovation (RD&I) to support Europe's energy transition.

BRIDGE is a cooperation group involving more than 150 EU-funded projects in the field of smart grid, energy storage, islands, and digitalisation.

The two initiatives are coordinated by the European Commission and their websites are hosted on the EUROPA server as the information generated belongs to the Commission. These websites must follow standards on their design to promote a common visual experience to all Commission related websites and initiatives. Costs engaged to host related services (e.g., secure environment, tools to develop and maintain websites) reach the amount of €30.000 per year per website.

Type of Action: Service Level Agreement

Indicative timetable: 1st quarter 2025 and 1st quarter 2026

Indicative budget: EUR 0.12 million from the 2025 budget

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Budget^{332 333}

	Budget line(s)	2025 Budget (EUR million)
Calls		
HORIZON-CL5-2025-01-Two-Stage		24.00
	<i>from 01.020250</i>	<i>24.00</i>
HORIZON-CL5-2025-02		274.00
	<i>from 01.020250</i>	<i>274.00</i>
HORIZON-CL5-2025-03-Two-Stage		7.00
	<i>from 01.020250</i>	<i>7.00</i>
HORIZON-CL5-2025-04		174.10
	<i>from 01.020250</i>	<i>174.10</i>
HORIZON-CL5-2025-05-Two-Stage		18.00
	<i>from 01.020250</i>	<i>18.00</i>
HORIZON-CL5-2025-06		139.50
	<i>from 01.020250</i>	<i>139.50</i>
HORIZON-CL5-2026-01		188.00
	<i>from 01.020250</i>	<i>188.00</i>
HORIZON-CL5-2026-02		318.00

³³² The budget figures given in this table are rounded to two decimal places.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

³³³ The contribution from Cluster 5 for the year 2025 is EUR 239.20 million for the Missions work programme part and EUR 43.62 million for the New European Bauhaus Facility work programme part.

Horizon Europe - Work Programme 2025
Climate, Energy and Mobility

	<i>from</i> <i>01.020250</i>	<i>318.00</i>
Contribution from this part to call HORIZON-CL4-2025-01 under Part 7 of the work programme		6.00
	<i>from</i> <i>01.020250</i>	<i>6.00</i>
Contribution from this part to call HORIZON-CL4-2025-02 under Part 7 of the work programme		5.00
	<i>from</i> <i>01.020250</i>	<i>5.00</i>
Other actions		
Grant awarded without a call for proposals according to Financial Regulation Article 198(e)		6.50
	<i>from</i> <i>01.020250</i>	<i>6.50</i>
Prize		1.00
	<i>from</i> <i>01.020250</i>	<i>1.00</i>
Public procurement		8.50
	<i>from</i> <i>01.020250</i>	<i>8.50</i>
Indirectly managed action		54.40
	<i>from</i> <i>01.020250</i>	<i>54.40</i>
Subscription action		2.20
	<i>from</i> <i>01.020250</i>	<i>2.20</i>
Provision of technical/scientific services by the Joint Research Centre		4.55
	<i>from</i> <i>01.020250</i>	<i>4.55</i>
Expert contract action		0.50
	<i>from</i> <i>01.020250</i>	<i>0.50</i>
Service Level Agreement		0.12

Horizon Europe - Work Programme 2025
Climate, Energy and Mobility

	<i>from</i> <i>01.020250</i>	<i>0.12</i>
Estimated total budget		1231.37

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Annex VIII

Horizon Europe

Work Programme 2025

9. Food, Bioeconomy, Natural Resources, Agriculture and Environment

IMPORTANT NOTICE:

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

This draft is made public before the adoption of the work programme to provide potential participants with the currently expected main lines of this work programme. Only the adopted work programme will have legal value.

The adoption of the work programme will be announced on the Horizon Europe website and on the Funding and Tenders Portal.

Information and topic descriptions indicated in this draft may not appear in the final work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

The Commission expressly disclaims liability for any future changes of the content of this document.

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DRAFT

Introduction

Horizon Europe Cluster 6 will serve the new Commission priorities for 2024-2029 with a focus on “Sustaining our quality of life: food security, water and nature” and “A new plan for Europe’s sustainable prosperity and competitiveness”. The Cluster will further contribute to the priorities “Supporting people, strengthening our societies and our social model” and “Protecting our democracy, upholding our values”.

The Horizon Europe mandate for Cluster 6 is to provide research and innovation opportunities to strengthen and balance environmental, social and economic goals and to set human economic activities on a path towards sustainability. Cluster 6 supports transformative change of the EU economy and society to reduce environmental degradation, halt and reverse the decline of biodiversity, better manage natural resources, and meet the EU’s climate objectives. This needs to happen while ensuring food and water security and fostering the sustainable prosperity and competitiveness of the EU, taking into account the evolving geopolitical context. The Work Programme builds on the new research and innovation (R&I) priorities outlined in the Horizon Europe Strategic Plan 2025-2027¹.

Activities in this Work Programme will contribute to all Key Strategic Orientations (KSOs) defined by the Strategic Plan, namely: 1) the green transition; 2) the digital transition; and 3) a more resilient, competitive, inclusive and democratic Europe.

To contribute to these programme-level KSOs, Cluster 6 will deliver on six specific expected impacts defined in the Strategic Plan. In this Work Programme, each expected impact has been developed into one or two specific destination(s) (see table below). Activities in a given destination may be of a cross-cutting nature and may often contribute to several expected impacts. The specific contribution to the overall expected impacts is explained in the narrative of each destination.

Expected impact (Strategic Plan 2025-2027)	Destination (Cluster 6 work programme)
27. Fostering mitigation of and adaptation to climate change in areas and sectors covered by Cluster 6.	Destination 5: Land, oceans and water for climate action
28. Putting biodiversity on a path to recovery, and protecting and restoring ecosystems and their services.	Destination 1: Biodiversity and ecosystem services
29. Achieving healthy soils and forests, as well as clean air, fresh water and marine water, whilst ensuring water resilience and the transition to a clean, competitive and circular economy and sustainable bioeconomy.	Destination 3: Circular economy and bioeconomy sectors Destination 4: Clean environment and zero pollution

¹ [Horizon Europe strategic plan 2025-2027 - Publications Office of the EU \(europa.eu\)](https://european-council.europa.eu/media/en/press-articles/2024/04/10/1024224.pdf)

30. Ensuring healthy food and nutrition security by making agriculture, fisheries, aquaculture and food systems sustainable, resilient, inclusive and within planetary boundaries.	Destination 2: Fair, healthy and environmentally friendly food systems from primary production to consumption
31. Sustainably developing rural, urban and coastal areas.	Destination 6: Resilient, inclusive, healthy and green rural, coastal and urban communities
32. Developing innovative governance models and tools enabling sustainability and resilience.	Destination 7: Innovative governance, environmental observations and digital solutions in support of the Green Deal

Cluster 6 will support the new innovation agenda for Europe and help accelerate the green transition by implementing the European Green Deal². Achieving climate neutrality by 2050 in line with the European Climate Law³ will be done by preserving Earth's natural carbon sinks and stocks in ecosystems, including soils and plants, forests, farmed lands and wetlands and the marine environment. This requires substantially reducing GHGs from the forestry and agricultural sectors and transforming the food system. In addition, activities will foster innovation on circular economy in line with the upcoming Circular Economy Act announced in the Clean Industrial Deal and exploit the potential of biological resources for renewable products. This will reduce the EU's dependence on resources and emissions/waste from industrial processes, transforming waste into resources and using more sustainable bio-based systems. At the same time, it will avoid trade-offs that could damage biodiversity and promote biodiversity protection.

In addition to the EU's climate policy, R&I will support the objectives and implementation of the EU Competitiveness Compass and of the European Green Deal for a competitive, resilient and sustainable agri-food system, the EU vision for agriculture and food, the EU biodiversity strategy for 2030⁴ and the Kunming-Montréal Global Biodiversity Framework⁵, the EU Clean Industrial Deal and the announced Circular Economy Act, the EU zero pollution action plan⁶, the updated EU bioeconomy strategy, the EU forest strategy for 2030⁷, the EU soil strategy for 2030⁸, the sustainable blue economy strategy⁹, the long-term vision for the EU's rural areas¹⁰, the chemicals strategy for sustainability¹¹ and the EU plastics strategy¹².

² [A European Green Deal | European Commission \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R1119)

³ [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R1119.](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R1119)

⁴ [EUR-Lex - 52020DC0380 - EN - EUR-Lex \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0380)

⁵ [https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf.](https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf)

⁶ [EUR-Lex - 52021DC0400 - EN - EUR-Lex \(europa.eu\).](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021DC0400)

⁷ [Forest strategy - European Commission](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021SC0323)

⁸ [EUR-Lex - 52021SC0323 - EN - EUR-Lex \(europa.eu\).](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021SC0323)

⁹ [eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0240.](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0240)

¹⁰ [The long-term vision for the EU's rural areas: key achievements and ways forward - European Union \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0240)

¹¹ [Chemicals strategy - European Commission.](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0240)

R&I in this cluster will help meet the long-term priority objectives to 2030 set out in the 8th Environment Action Programme¹³ and contribute to ensuring that policy development is firmly anchored to the latest science and knowledge. This cluster will also contribute to achieving the target of dedicating 10% of the Multiannual Financial Framework 2021-2027 annual spending to biodiversity as of 2025.

Protecting and restoring the integrity of ecosystems and their capacity to deliver essential services is fundamental to achieving European Green Deal objectives. This will put Europe's biodiversity on a path to recovery by 2030, as required by the EU biodiversity strategy for 2030. Avoiding biodiversity loss (from genes to species and ecosystems) could also help avoid threats to human health in the future. In 2025, this cluster will improve knowledge on the state of biodiversity, the role of ecosystems and their services and will notably develop innovative solutions to support the implementation of the EU Nature Restoration Regulation¹⁴. This cluster deals with agriculture, forestry, aquaculture and fisheries, food and bio-based systems, which have profound environmental impacts and are also affected by global environmental changes, while providing opportunities for economic and social sustainability in the context of Europe's strategic autonomy.

Cluster 6 will accelerate the transition to competitive, resilient, sustainable, healthy and inclusive food systems to achieve the objectives of the European Green Deal, the Vision for agriculture and food and the United Nations Sustainable Development Goals (SDGs). It will empower farmers, fishers and aquaculture producers to efficiently transform their production methods, making the best use of nature-based solutions, technological, digital and social innovations and transferable knowledge while supporting fair incomes and the competitiveness of the entire EU food value chain. This will accelerate climate mitigation and result in positive environmental outcomes, increased climate resilience and reduced dependency on pesticides and antimicrobials, fostering multi-disciplinary approaches including the One Health approach¹⁵. Furthermore, it will also provide consumers with affordable, safe, nutritious, healthy and sustainable food. R&I will also stimulate sustainable practices at all stages of the food system from production to processing, services, the use and valorisation of waste and by-products and surplus management. This will ensure safe and sustainable food and enable a shift to sustainable and healthy diets. R&I will also support the design, implementation and monitoring of the common agricultural policy (CAP), the common fisheries policy (CFP) and the EU General Food Law¹⁶.

Improved knowledge and innovations will be key to achieving the transition towards a sustainable and circular economy and the zero-pollution ambition of the European Green Deal to halt and prevent pollution, by addressing issues concerning fresh and marine waters, soils, nutrients as well as the environmental performance of processes. R&I will support EU environmental legislation and policies that target a higher level of protection for biodiversity,

¹² [Plastics strategy - European Commission.](#)

¹³ https://ec.europa.eu/environment/strategy/environment-action-programme-2030_en.

¹⁴ [Regulation - EU - 2024/1991 - EN - EUR-Lex.](#)

¹⁵ [One health](#)

¹⁶ [General Food Law - European Commission](#)

soil, water, air and marine resources, including the Nature Restoration Regulation, the Birds Directive¹⁷ and the Habitats Directive¹⁸, the EU pollinators initiative¹⁹, the upcoming European Water Resilience Strategy, the Water Framework Directive²⁰, the Marine Strategy Framework Directive²¹, the revised Ambient Air Quality Directives²², the EU waste legislation²³, the Ecodesign for Sustainable Products Regulation²⁴ the upcoming European Ocean Pact and the EU Arctic policy as well as the objectives of the proposal for a directive on soil monitoring and resilience²⁵ and of the proposal for a regulation on a Forest Monitoring Framework²⁶.

The cluster will help develop resilient and vibrant rural, coastal and urban communities in line with the Commission priority ‘Sustaining our quality of life: food security, water and nature’. To support the long-term vision for rural areas by 2040, it will help achieve thriving rural innovation ecosystems by supporting and/or establishing synergetic initiatives such as living labs, smart and start-up villages, European Innovation Partnership for Agriculture Productivity and Sustainability (EIP-AGRI) operational groups and a Thematic Smart Specialisation Platform. It will develop innovative governance models to implement the European Green Deal, ensuring a fair and just transition and that no one is left behind. The cluster will foster the use, uptake and deployment of environmental observations and take advantage of data and digital solutions in line with the EU priority ‘A new plan for Europe's sustainable prosperity and competitiveness’.

To be more effective in achieving a positive impact, proposals should synergise with relevant Horizon Europe initiatives, including European Partnerships, Missions and the Knowledge and Innovation Communities (KICs) of the European Institute of Innovation and Technology (EIT). Through Cluster 6, special attention will be given to ensuring cooperation between universities, scientific communities and industry, including SMEs, citizens and civil society and their representatives. This allows bridging gaps and reducing inequalities between genders, territories, generations and regional cultures, supporting women innovators and caring for the needs of young people in shaping Europe's future.

In this context, applicants should consider and actively seek synergies with, and, where appropriate, possibilities for further funding from other R&I-relevant EU, national or regional programmes, such as the European Regional Development Fund (ERDF)²⁷, the European

¹⁷ [EUR-Lex - 32009L0147 - EN - EUR-Lex \(europa.eu\).](#)

¹⁸ [EUR-Lex - 31992L0043 - EN - EUR-Lex \(europa.eu\).](#)

¹⁹ [EUR-Lex - 52018DC0395 - EN - EUR-Lex \(europa.eu\).](#)

²⁰ [EUR-Lex - 32000L0060 - EN - EUR-Lex \(europa.eu\).](#)

²¹ <http://data.europa.eu/eli/dir/2008/56/oj>

²² https://environment.ec.europa.eu/topics/air/air-quality_en.

²³ https://environment.ec.europa.eu/topics/waste-and-recycling/waste-law_en.

²⁴ [EUR-Lex - 52022PC0142 - EN - EUR-Lex \(europa.eu\)](#)

²⁵ [EUR-Lex - 52023PC0416 - EN - EUR-Lex.](#)

²⁶ [Proposal for a Regulation on a Forest Monitoring Framework - European Commission.](#)

²⁷ The ERDF (including Interreg) focuses, among others, on the development and strengthening of regional and local R&I ecosystems and smart economic transformation, in line with regional/national smart specialisation strategies. It can support investment in research infrastructure, activities for applied research and innovation, including industrial research, experimental development and feasibility

Social Fund Plus (ESF+), the Just Transition Fund (JTF), the European Maritime Fisheries and Aquaculture Fund (EMFAF), the European Agricultural Fund for Rural Development (EAFRD), the LIFE Programme, InvestEU and private funds or financial instruments.

Synergies are also sought with the work of the European Space Agency (ESA) to ensure complementarities and mutual benefits with R&I actions conducted by ESA, contributing to the European Commission-ESA Earth System Science initiative to support significant breakthrough in the areas covered by the Cluster.

Research on a societal and political framework is necessary to achieve the transformation expected and R&I investments under Cluster 6 will therefore emphasise the essential role played by the social sciences and humanities (SSH) for accelerating the green transition as well as gender aspects, citizens and societal engagement and inter- and trans-disciplinary and systems approaches. R&I will build on existing research infrastructures.

Cluster 6 activities will sustain the EU's ambition in international fora in areas such as biodiversity, climate change, the management of natural resources, seas and ocean, zero pollution, sustainable agriculture, food safety and food and nutrition security. In line with the EU's global approach to research and innovation, and in support of the global gateway strategy, projects involving international partners will lead to increased scientific knowledge and transfer of technology, to address global challenges while fostering sustainable growth and job creation in the sectors covered by the Cluster. Special attention is given to the EU-African Union Partnership on Food and Nutrition Security and Sustainable Agriculture (FNSSA). Cooperation should take place in a value-based way, creating linkages, not dependencies. Legal entities established in China are not eligible to participate in Innovation Actions in any capacity. Please refer to the Annex B of the General Annexes of this Work Programme for further details.

The cluster is strongly committed to the UN SDGs which have an important impact on food, bioeconomy, natural resources, agriculture and the environment, notably SDG 2 (Zero hunger), SDG 3 (Good health and well-being), SDG 6 (Clean water and sanitation), SDG 8 (Decent work and economic growth), SDG 9 (Industry, innovation and infrastructure), SDG 11 (Sustainable cities and communities), SDG 12 (Responsible consumption and production), SDG 13 (Climate action), SDG 14 (Life below water) and SDG 15 (Life on land).

Applicants are encouraged to consider, where relevant, their possible contribution to Joint Research Centre (JRC) relevant platforms for capitalizing on the knowledge developed in their projects, and becoming more policy relevant, contributing in terms of data, indicators and knowledge²⁸. For instance, they could make reference to: the [European Platform on Life Cycle Assessment](#) (LCA) and to the [Environmental footprint method](#) when applying LCA; the [Raw Materials Information System](#); the [European Soil Observatory](#); the [Integrated Natural](#)

studies, building research and innovation capacities, uptake of advanced technologies and roll-out of innovative solutions from EU R&I Framework Programmes.

²⁸ Contributions with relevant data, indicators or knowledge to these JRC managed platform do not require having the JRC as a partner (associated partner/beneficiary requesting zero funding) in a project, unless it is explicitly mentioned in a specific topic.

[Capital Accounting platform](#); the [EC Knowledge Centre for Biodiversity](#); the [EC Knowledge Centre for Global Food and Nutrition Security](#), the [EC Knowledge Centre for Bioeconomy](#), the [Africa Knowledge Platform](#); the [EC Knowledge Centre on Earth Observation](#); [Innovation in the Built Environment \(iBUILT+\)](#) and/or the [EU Forests Observatory](#).

Applicants are also encouraged to consider, where relevant, the services offered by the EU-funded European Research Infrastructures, notably those prioritised by the European Strategy Forum on Research Infrastructures (ESFRI)²⁹, European Research Infrastructure Consortia (ERICs)³⁰ and the European Open Science Cloud (EOSC)³¹.

Specific requirements for multi-actor projects:

Proposals submitted for topics including the eligibility condition to follow the multi-actor approach must meet all of the requirements below. The multi-actor approach is a form of interactive, transdisciplinary and responsible R&I that aims to make the R&I process more co-creative and inclusive, and thereby its outcomes are more co-owned, reliable, demand-driven and relevant to society. It also aims to extensively share these outcomes and to widely use them in practice. This entails more than just widely disseminating the projects' results or listening to the views of a board of stakeholders. A multi-actor project ensures the genuine and sufficient involvement of a targeted array of actors in co-creation, which serves the objectives of the project proposal.

These actors include: i) researchers, ii) farmers / farmers' groups and associations, iii) foresters / foresters' groups and associations, iv) aquaculture producers, v) fishers / fishers' groups and associations, vi) advisors, vii) food and bioeconomy businesses, viii) other businesses, ix) consumer associations, x) local communities, xi) citizens, xii) civil society organisations including NGOs and social economy actors, and xiii) government representatives. The selection of key actors that are relevant to participate depends on the objective(s) of the proposal that respond(s) to the needs of the (end-)users of the project results. The key actors are essentially the (end-)users³² of the project results who are backed up by any other useful intermediaries and actors who can contribute with further expertise and innovative ideas relevant to the topic's objectives, and support communication and dissemination. The genuine and sufficient involvement of such actors should take place over the whole course of the project: from participation in the development of the project idea, planning and experiments to implementation, communication and dissemination of results and to a possible demonstration phase.

Building blocks for the project proposal are expected to come from science as well as from practice: it is a 'co-creation' process. (End-)users are involved in the project activities not as a study-object, but to use their practical and local knowledge and/or entrepreneurial skills to develop solutions and to create 'co-ownership' of results for (end-) users. This

²⁹ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>.

³⁰ The ERIC Landscape <https://www.eric-forum.eu/the-eric-landscape/>.

³¹ [Home | European Open Science Cloud - EU Node](#).

³² An "(end-) user" of project result is a person who is him/herself using the project results in practice.

should speed and scale up the acceptability and uptake of new ideas, approaches and solutions developed in the project in practice.

Therefore, a multi-actor project proposal must meet the following requirements:

- it must demonstrate how the description of the project concept, including the proposed objectives, activities and planning, are targeting the needs/challenges/opportunities for the (end-)users of the project results;
- it must demonstrate how the composition of the consortium fits into the project concept and reflects a balanced choice of relevant actors who have complementary types of knowledge (scientific, practical, etc.) and skills to achieve the project objective, and to ensure that project results are ready for practice and broadly implemented;
- it must demonstrate how the project intends to use existing practices and tacit knowledge. This should be illustrated in the proposal methodology with a sufficient number of high-quality knowledge exchange activities outlining the precise and active roles of the different, relevant non-scientific actors in the co-creation and sharing of R&I contents. The cross-fertilisation of skills, experiences, competencies and ideas between actors should generate innovative findings and solutions that are more likely to be widely applied in practice;
- it must demonstrate how the project will facilitate the multi-actor engagement process by making use of the most appropriate methods and expertise and what mechanisms the project will set up to maintain engagement of different, relevant actors, in particular non-scientific actors, during the whole project lifecycle;
- it must demonstrate the project's added-value for the (end-)users: how it will complement and advance state-of-the-art, including existing knowledge and best practices;
- it must demonstrate how the project will result in practical and ready to use knowledge, solutions, approaches, tools, products, processes or services that are easily understandable and accessible for (end-)users;
- it must demonstrate how these results ready for practice will be widely and effectively disseminated, and feed into the existing dissemination channels most consulted and trusted by the (end-)users of the project results in countries and regions.

In addition, to ensure Europe-wide communication and dissemination in all areas related to the European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI)³³ and the common agricultural policy (CAP) specific objectives³⁴, in particular

³³ For the areas covered by the EIP-AGRI see section 8 (pp.8-9) of the Commission Communication 2012(79) final: eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0079&from=EN : Increased agricultural productivity, output, and resource efficiency, the bioeconomy, biodiversity,

agriculture, forestry and rural development, the new knowledge and innovation generated by the multi-actor projects must be summarised in an appropriate number of ‘practice abstracts’ in the common EIP-AGRI format for Horizon³⁵. The number of ‘practice abstracts’ depends on the size of the project and the volume of results which are ready to be applied in practice. The ‘practice abstracts’ stemming from Horizon Europe projects should be uploaded to the EIP-AGRI project database using a dedicated online form accessible via the EU CAP Network website³⁶.

For areas falling outside the remit of EIP-AGRI and CAP specific objectives, other similarly effective solutions ensuring dissemination at European level should be sought. Where appropriate, it is strongly recommended to involve interactive innovation groups such as the EIP-AGRI operational groups funded under the CAP.

climate, ecosystem services and soil functionality, products and services for the integrated supply chain, and food quality, food safety and healthy lifestyles.

³⁴ For areas covered by the CAP specific objectives see Article 6 of the Regulation (EU) 2021/2115 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2021.435.01.0001.01.ENG.

³⁵ The EIP common format for "practice abstracts" is available at the following link: [Practice abstracts | EU CAP Network](#)

³⁶ [Practice abstracts | EU CAP Network](#)

Calls

Call - Cluster 6 Call 01 - single stage

HORIZON-CL6-2025-01

Overview of this call³⁷

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)			Expected EU contribution per project (EUR million) ³⁸	Indicative number of projects expected to be funded
		2025	2026	2027		
Opening: 06 May 2025 Deadline(s): 17 Sep 2025						
Destination - Biodiversity and ecosystem services						
HORIZON-CL6-2025-01-BIODIV-01: Additional activities for the European Biodiversity Partnership: Biodiversa+	COFUND	20.00	20.00	20.00	Around 60.00	1
HORIZON-CL6-2025-01-BIODIV-02: Strengthening the capacity of citizen science in biodiversity observation	CSA	4.00			Around 4.00	1
HORIZON-CL6-2025-01-BIODIV-03: Strengthening taxonomic approaches for	RIA	24.00			Around 12.00	2

³⁷ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

³⁸ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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biodiversity						
HORIZON-CL6-2025-01-BIODIV-04: Large-scale in situ biodiversity observations for better understanding of biodiversity state, drivers of its decline and impacts of policies	RIA	22.00			Around 11.00	2
HORIZON-CL6-2025-01-BIODIV-05: Assessing and modelling ecosystems' dynamic processes to guide restoration activities and to improve models used for climate	RIA	18.00			Around 6.00	3
HORIZON-CL6-2025-01-BIODIV-06: Assessing and modelling socio-economic impacts of nature restoration	RIA	16.00			5.00 to 6.00	3
HORIZON-CL6-2025-01-BIODIV-07: Integrated and coordinated approaches for coral reefs and associated ecosystems (mangroves and seagrass beds) conservation, restoration, and climate mitigation and adaptation	RIA	12.00			Around 6.00	2
HORIZON-CL6-2025-01-BIODIV-08: Strengthening pathways to alternative socio-economic models for continuous improvement of biodiversity	RIA	14.00			Around 7.00	2
HORIZON-CL6-2025-01-BIODIV-09: Understanding the perceptions of and improving communication on the biodiversity crisis and nature restoration benefits to sustain citizen engagement	RIA	6.00			Around 3.00	2

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and democratic governance						
HORIZON-CL6-2025-01-BIODIV-10: Supporting the implementation of nature restoration measures for sustainable farming systems	RIA	11.00			5.00 to 6.00	2
Destination - Circular economy and bioeconomy sectors						
HORIZON-CL6-2025-01-CIRCBIO-01: Novel circular business models to enable the just transition to a sustainable and circular economy	IA	10.00			Around 5.00	2
HORIZON-CL6-2025-01-CIRCBIO-02: Improving ecodesign of products and development of testing methods for products prioritised under the Ecodesign for Sustainable Products Regulation	RIA	8.00			Around 4.00	2
HORIZON-CL6-2025-01-CIRCBIO-03: Product Environmental Footprint (PEF) of policy and market-relevant product groups	RIA	8.00			Around 4.00	2
HORIZON-CL6-2025-01-CIRCBIO-04: Development and testing of Extended Producer Responsibility schemes (EPR) within the priority Circular Economy Action Plan value chains	IA	10.00			Around 5.00	2
HORIZON-CL6-2025-01-CIRCBIO-05: Consumption patterns and environmental awareness as enablers of transition to circular economy	IA	12.00			Around 6.00	2

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HORIZON-CL6-2025-01-CIRCBIO-06: Indicators for the transition to sustainable and circular economy	RIA	8.00			Around 4.00	2
HORIZON-CL6-2025-01-CIRCBIO-07: Demonstration, deployment and upscaling of circular systemic solutions in cities and regions (Circular Cities and Regions Initiative)	IA	18.00			Around 9.00	2
HORIZON-CL6-2025-01-CIRCBIO-08: Bioprospecting and optimized production of the terrestrial natural products: new opportunities for bio-based sectors	IA	11.00			Around 5.50	2
HORIZON-CL6-2025-01-CIRCBIO-09: Unleashing the potential and advancing the impact of the digitalization/Artificial Intelligence of the climate-neutral bio-based value chains	IA	10.00			Around 5.00	2
HORIZON-CL6-2025-01-CIRCBIO-10: Support to the EU Biotechnology and Biomanufacturing Initiative: scoping action	CSA	2.00			Around 2.00	1
HORIZON-CL6-2025-01-CIRCBIO-11: Demonstration of reduced energy use and optimised flexible energy supply for industrial bio-based systems	IA	11.00			Around 5.50	2
HORIZON-CL6-2025-01-CIRCBIO-12: Harmonizing and optimising composting	CSA	2.00			Around 2.00	1

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plants performances in Europe						
HORIZON-CL6-2025-01-CIRCBIO-13: Reconstructing areas affected by conflicts: the role of the bio-based solutions	RIA	8.00			Around 4.00	2
HORIZON-CL6-2025-01-CIRCBIO-14: Bioprospecting and optimised production of marine/aquatic natural products in the omics & artificial intelligence era	IA	12.00			Around 6.00	2
HORIZON-CL6-2025-01-CIRCBIO-15: European partnership: Forests and Forestry for a Sustainable Future	COFUND	10.00	30.00	30.00	Around 70.00	1
Destination - Clean environment and zero pollution						
HORIZON-CL6-2025-01-ZEROPOLLUTION-01: Innovative and advanced monitoring and modelling systems for revised air quality policies	RIA	10.00			Around 10.00	1
HORIZON-CL6-2025-01-ZEROPOLLUTION-02: Environmental impacts from the production of agricultural crops for bio-based industrial systems	CSA	2.00			Around 2.00	1
HORIZON-CL6-2025-01-ZEROPOLLUTION-03: Environmental biotechnology applications in service of remediation of polluted ecosystems	RIA	8.00			Around 4.00	2

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HORIZON-CL6-2025-01-ZEROPOLLUTION-04: Towards a comprehensive European strategy to assess and monitor aquatic litter including plastic and microplastic pollution	RIA	6.00			Around 6.00	1
HORIZON-CL6-2025-01-ZEROPOLLUTION-05: EU-India cooperation on cumulative impacts of marine pollution on marine organisms and ecosystems	RIA	12.00			Around 6.00	2
HORIZON-CL6-2025-01-ZEROPOLLUTION-06: Provide digital solutions tailored to small and medium-sized farms to monitor and sustainably manage agricultural inputs and natural resources	IA	8.00			Around 8.00	1
HORIZON-CL6-2025-01-ZEROPOLLUTION-07: Reducing pollution from the food and drink industries	IA	12.00			Around 6.00	2
Overall indicative budget		345.00	50.00	50.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General

	Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Cluster 6 Call 02 - single stage

HORIZON-CL6-2025-02

Overview of this call³⁹

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)			Expected EU contribution per project (EUR million) ⁴⁰	Indicative number of projects expected to be funded
		2025	2026	2027		
Opening: 06 May 2025 Deadline(s): 16 Sep 2025						
Destination - Fair, healthy and environment-friendly food systems from primary production to consumption						
HORIZON-CL6-2025-02-FARM2FORK-01: Additional activities for the European partnership on accelerating farming systems transition - agroecology living labs and research	COFUND	30.00	30.00	30.00	Around 90.00	1

³⁹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁴⁰ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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infrastructures						
HORIZON-CL6-2025-02-FARM2FORK-02: Additional activities for the European partnership on animal health and welfare	COFUND	40.00	40.00	40.00	Around 120.00	1
HORIZON-CL6-2025-02-FARM2FORK-03: Overcoming the barriers for scaling up circular water management in agriculture	IA	12.00			Around 6.00	2
HORIZON-CL6-2025-02-FARM2FORK-04: Enhancing plant protein production to bolster the resilience of agricultural systems and EU self-sufficiency in plant protein used as feed	RIA	11.00			Around 5.50	2
HORIZON-CL6-2025-02-FARM2FORK-05: Developing innovative phytosanitary measures for plant health - focus on systems approach for pest risk management	RIA	12.00			Around 6.00	2
HORIZON-CL6-2025-02-FARM2FORK-06: Improving grassland management in European livestock farming systems	RIA	16.00			Around 8.00	2
HORIZON-CL6-2025-02-FARM2FORK-07: Fostering animal breeding and genetics for climate change adaptation and mitigation, improved	RIA	12.00			Around 6.00	2

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robustness and resilience						
HORIZON-CL6-2025-02-FARM2FORK-08: Exploring the potential of controlled environment agriculture (CEA)	RIA	6.00			Around 6.00	1
HORIZON-CL6-2025-02-FARM2FORK-09: Strengthening the EU crop breeding research and innovation ecosystem for competitive, resilient, and sustainable agriculture	CSA	3.00			Around 3.00	1
HORIZON-CL6-2025-02-FARM2FORK-10: Diversifying aquaculture production with emphasis on low-trophic species	IA	12.00			Around 6.00	2
HORIZON-CL6-2025-02-FARM2FORK-11: Towards modern, integrated, and effective fisheries monitoring, control and surveillance (MCS) systems	IA	12.00			Around 6.00	2
HORIZON-CL6-2025-02-FARM2FORK-12: Nutrition and Mental Health	RIA	10.00			Around 5.00	2
HORIZON-CL6-2025-02-FARM2FORK-13: Raising citizen awareness on alternative proteins derived from biotechnology	CSA	2.00			Around 2.00	1
HORIZON-CL6-2025-02-FARM2FORK-14: Nutrients produced by microorganisms utilising	IA	12.00			Around 6.00	2

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primarily CO ₂ from the air, with the support of biotechnology						
HORIZON-CL6-2025-02-FARM2FORK-15: Additional activities of the European partnership on sustainable food systems for people, planet and climate	COFUND	35.00	45.00	50.00	Around 130.00	1
HORIZON-CL6-2025-02-FARM2FORK-16: Developing a joint AU-EU Agricultural Knowledge and Innovation System (AKIS) supporting the Food and Nutrition Security and Sustainable Agriculture (FNSSA) partnership	RIA	6.00			Around 6.00	1
HORIZON-CL6-2025-02-FARM2FORK-17: Nutrition in emergency situations - Ready-to-use Supplementary Food (RUSF) and Ready-to-use Therapeutic Food (RUTF)	RIA	8.00			Around 4.00	2
Destination - Land, ocean and water for climate action						
HORIZON-CL6-2025-02-CLIMATE-01: The ocean-climate-biodiversity nexus and marine carbon dioxide removal (mCDR)	RIA	12.00			Around 6.00	2
HORIZON-CL6-2025-02-CLIMATE-02: The ocean-climate-biodiversity-people nexus: uncovering safe operating space for safeguarding the integrity and health of the global	RIA	19.50			Around 6.50	3

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ocean						
HORIZON-CL6-2025-02-CLIMATE-03: Understanding and managing medium and longer-term challenges and opportunities for agriculture stemming from shifting climatic zones and changing agroecological environments	RIA	10.00			Around 5.00	2
HORIZON-CL6-2025-02-CLIMATE-04: Monitoring, reporting, verification and mitigation of non-CO2 greenhouse gas emissions and related air pollutants from agriculture	RIA	12.00			Around 6.00	2
HORIZON-CL6-2025-02-CLIMATE-05: Additional activities for the European Partnership Water Security for the Planet (Water4All)	COFUND	23.00	23.00	24.00	Around 70.00	1
Destination - Resilient, inclusive, healthy and green rural, coastal and urban communities						
HORIZON-CL6-2025-02-COMMUNITIES-01: Adapting to and mitigating demographic trends in rural areas through evidence-based planning and innovative solutions	RIA	13.00			Around 6.50	2
HORIZON-CL6-2025-02-COMMUNITIES-02: Exploring and improving access to housing in rural areas and developing the houses and villages of the	RIA	6.00			Around 6.00	1

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future						
HORIZON-CL6-2025-02-COMMUNITIES-03: Innovative solutions for resilient and climate-adapted coastal communities in the Atlantic	IA	6.00			Around 6.00	1
HORIZON-CL6-2025-02-COMMUNITIES-04: Creating urban co-creation spaces for driving sustainable food system transformation	RIA	12.00			Around 6.00	2
Overall indicative budget		352.50	138.00	144.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Cluster 6 Call 03 - single stage

HORIZON-CL6-2025-03

Overview of this call⁴¹

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁴²	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025 Deadline(s): 24 Sep 2025				
Destination - Innovative governance, environmental observations and digital solutions in support of the Green Deal				
HORIZON-CL6-2025-03-GOVERNANCE-01: Improving analytical capacity and understanding of the bargaining power and interactions of farmers with the operators of the value chains	RIA	6.00	Around 6.00	1
HORIZON-CL6-2025-03-GOVERNANCE-02: Upscaling innovative payments to support farmers in the delivery of agri-environment-climate public goods	IA	12.00	Around 6.00	2
HORIZON-CL6-2025-03-GOVERNANCE-03: Boosting the attractiveness of agriculture and the connection between the farming community and society	RIA	12.00	Around 6.00	2
HORIZON-CL6-2025-03-GOVERNANCE-04: Operationalisation of bioeconomy sustainability principles	RIA	8.00	Around 4.00	2
HORIZON-CL6-2025-03-GOVERNANCE-05: Exploring options to resolve land and sea	RIA	9.00	Around	2

⁴¹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁴² Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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use competition			4.50	
HORIZON-CL6-2025-03-GOVERNANCE-06: Strengthening and connecting bioeconomy networks	CSA	4.40	Around 4.40	1
HORIZON-CL6-2025-03-GOVERNANCE-07: Strengthening the European Research Area by enhancing the bioeconomy research and innovation ecosystem in BIOEAST countries	CSA	4.00	Around 4.00	1
HORIZON-CL6-2025-03-GOVERNANCE-08: Effective environmental observing systems and associated governance	RIA	10.00	Around 5.00	2
HORIZON-CL6-2025-03-GOVERNANCE-09: Delivering Earth Intelligence to accelerate the green and digital transition	IA	15.00	Around 7.50	2
HORIZON-CL6-2025-03-GOVERNANCE-10: Improving and integrating polar observation systems in response to user requirements at local, regional, and international level	RIA	16.00	Around 8.00	2
HORIZON-CL6-2025-03-GOVERNANCE-11: Enhancing sustainability and resilience of agriculture, forestry and rural development through digital twins	RIA	12.00	Around 6.00	2
HORIZON-CL6-2025-03-GOVERNANCE-12: Increasing knowledge flows to practice within Agricultural Knowledge and Innovation Systems (AKIS) via thematic networks	CSA	3.00	Around 3.00	1
HORIZON-CL6-2025-03-GOVERNANCE-13: Strengthening knowledge and skills of advisors and integrating them within Agricultural Knowledge and Innovation Systems (AKIS) via an EU advisory network	CSA	10.00	Around 10.00	1
HORIZON-CL6-2025-03-GOVERNANCE-14: Preparing farmers, their workforce and advisors to the future of agriculture by providing the relevant knowledge, skills and competences at the right time and place	RIA	8.00	Around 8.00	1

Overall indicative budget		129.40		
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General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Cluster 6 Call 01 - two stage

HORIZON-CL6-2025-01-two-stage

Overview of this call⁴³

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁴⁴	Indicative number of projects expected to be
		2025		

⁴³ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁴⁴ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Horizon Europe - Work Programme 2025
Food, Bioeconomy, Natural Resources, Agriculture and Environment

				funded
Opening: 06 May 2025				
Deadline(s): 04 Sep 2025 (First Stage), 18 Feb 2026 (Second Stage)				
Destination - Biodiversity and ecosystem services				
HORIZON-CL6-2025-01-BIODIV-01-two-stage: Living labs co-creating innovative solutions for forests and freshwater ecosystems restoration	RIA	14.00	Around 7.00	2
HORIZON-CL6-2025-01-BIODIV-02-two-stage: Breeding for resilience: enhancing multi-stress tolerance in crops	RIA	14.00	Around 7.00	2
Destination - Circular economy and bioeconomy sectors				
HORIZON-CL6-2025-01-CIRCBIO-01-two-stage: Open Topic: Innovative solutions for the sustainable and circular transformation of SMEs	IA	10.00	Around 5.00	2
Destination - Clean environment and zero pollution				
HORIZON-CL6-2025-01-ZEROPOLLUTION-01-two-stage: Substances of concern and emerging pollutants from bio-based industries and products: mapping and replacement	IA	10.00	Around 5.00	2
Overall indicative budget		48.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General

	Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Cluster 6 Call 02 - two stage

HORIZON-CL6-2025-02-two-stage

Overview of this call⁴⁵

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁴⁶	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025				
Deadline(s): 04 Sep 2025 (First Stage), 18 Feb 2026 (Second Stage)				
Destination - Fair, healthy and environment-friendly food systems from primary production to consumption				
HORIZON-CL6-2025-02-FARM2FORK-01-two-stage: Emerging and future risks to plant health	RIA	12.00	Around 6.00	2
HORIZON-CL6-2025-02-FARM2FORK-02-two-stage: Open topic: Innovating for on-farm post-harvest operations, storage and transformation of crops into food and non-food products	IA	12.00	Around 6.00	2

⁴⁵ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁴⁶ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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HORIZON-CL6-2025-02-FARM2FORK-03-two-stage: Making food systems more resilient to food safety risks through the deployment of technological solutions	IA	12.00	Around 6.00	2
HORIZON-CL6-2025-02-FARM2FORK-04-two-stage: Research and innovation for food waste prevention and reduction at household level through measurement, monitoring and new technologies	RIA	8.00	Around 4.00	2
HORIZON-CL6-2025-02-FARM2FORK-05-two-stage: Developing agroecology living labs and lighthouses for climate action under the Food and Nutrition Security and Sustainable Agriculture (FNSSA) partnership	RIA	12.00	Around 6.00	2
Destination - Land, ocean and water for climate action				
HORIZON-CL6-2025-02-CLIMATE-01-two-stage: Strengthening the resilience of water systems and water sector to climate and global socio-economic change impacts	IA	18.00	Around 6.00	3
Overall indicative budget		74.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant</i>	The rules are described in General Annex G.

<i>Agreements</i>	
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Destinations

Destination - Biodiversity and ecosystem services

Under destination “Biodiversity and ecosystem services”, R&I in 2025 provides scientific support to the development and implementation of EU environmental legislation and of European Green Deal initiatives, in line with the new Commission priority “Sustaining our quality of life: food security, water and nature”.

This destination is based on the vision developed in the EU biodiversity strategy for 2030 and supports its implementation, pursuing the orientations of the Work Programmes 2021-2022 and 2023-2024, and notably focuses on the EU Nature Restoration Regulation and other new European Green Deal initiatives such as the proposal for an EU soil monitoring and resilience law, the proposal for an EU forest monitoring law and the EU Taxonomy for Sustainable Activities (specifically the Environmental Delegated Act) and the EU action plan: protecting and restoring marine ecosystems for sustainable and resilient fisheries. R&I activities continue to support the environmental objectives of the common agricultural policy and reflect the strong interconnections between the EU biodiversity strategy for 2030 and the European Green Deal objectives for a competitive, resilient and sustainable agri-food system, including the pollinators initiative.

R&I on biodiversity and ecosystems services, if translated into action, contribute to a clean environment for the EU and Associated Countries, including water, soil, air, health, climate adaptation and risk (including disaster risk) reduction, sustainable bioeconomy and blue economy policies.

This destination also contributes to the twin green and digital transition. Where relevant, advantage should be taken of the use of advanced digital technologies and tools such high-performance computing, Artificial Intelligence (AI) and Environmental Observation where appropriate.

This destination supports the EU leadership in the relevant international fora and develops analysis and tools to reach our international biodiversity commitments, such as those taken in the Kunming-Montreal Global Biodiversity Framework (GBF), in line with the new Commission priorities. It will in particular support the monitoring framework of the GBF. Its activities serve the objectives of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), the Intergovernmental Panel on Climate Change (IPCC) and of the potential International/Intergovernmental Panel for Ocean Sustainability (IPOS).

Proposals for topics under this destination should set out a credible pathway contributing to **“putting biodiversity on a path to recovery, and protecting and restoring ecosystems and their services”** of the Strategic Plan 2025-2027, and more specifically to one or more of the following impacts:

- improved knowledge, innovations, methods, pathways and tools are available to protect healthy ecosystems and to restore degraded ones ensuring the provision of ecosystem services, including for adaptation and/or mitigation to climate change;
- the ongoing biodiversity crisis and its consequences, the benefits of ecosystem services and the need to protect and restore them are better understood. Policymakers and all relevant sectors of society are aware and well informed thereof, and fully grasp opportunities of biodiversity protection and restoration. Society is on a path of transformative change;
- farmers, foresters, and land managers test and implement biodiversity-friendly practices while safeguarding food security and the long-term sustainability of farming and forestry;
- progress towards reaching the goals and targets of the Kunming-Montréal Global Biodiversity Framework contributes to reducing the pressure on biodiversity and to ensuring sustainable development worldwide.

R&I under Destination “Biodiversity and ecosystem services” will mostly deliver under Key Strategic Orientation (KSO) 1 of Horizon Europe Strategic Plan 2025-2027: Green transition and to a lesser extent KSO 3: A more resilient, competitive, inclusive and democratic Europe.

Spending under this destination counts 100% against the target for biodiversity expenditure under Horizon Europe. In addition, most of the activities, especially in the area of ecosystem restoration, contribute to the target for climate expenditure in line with the European Climate Law, which acknowledges that the restoration of ecosystems can maintain, manage and enhance natural sinks.

The Work Programme 2025 supports additional activities of the European Biodiversity Partnership Biodiversa+, while ensuring complementarity of actions with other instruments.

Synergies are sought with:

- EU missions, in particular “A Soil Deal for Europe” and “Restoring our ocean and waters by 2030” in topics dealing with nature restoration;
- Horizon Europe partnerships: in addition to Biodiversa +, several co-funded partnerships under Cluster 6 notably Water4All, sustainable blue economy and agroecology;
- JRC activities, notably the EC Knowledge Centre for Biodiversity (KCBD) and its Science Service for Biodiversity (SSBD), the Competence Centre on Participatory and Deliberative Democracy, the European Technical Support Centre for the Global Biodiversity Framework as requested by the Convention on Biological Diversity, European regional centre for biodiversity and the Global Knowledge Support Service for Biodiversity (GKSSB).

To maximise the impacts of R&I under this destination, international cooperation is encouraged in topics as appropriate. International cooperation is sought, in particular in topics that support IPBES, the implementation of the Kunming-Montreal Global Biodiversity Framework, the Sustainable Development Goals, the Paris Agreement and related international agreements such as the Agreement on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ).

Under this destination there is a substantial need for more fundamental research and therefore there is a majority of Research and Innovation Actions (RIAs).

This destination benefits from interdisciplinarity and trans-disciplinarity, including the contribution of social sciences and humanities (SSH), and takes into due account gender and other social categories and their intersections to ensure promotion of democracy and a socially just transition where relevant. Citizens and stakeholders' engagement will be sought including with living labs. The destination is expected to contribute to the new Commission priority "Protecting our democracy, upholding our values" by engaging with civil society. Furthermore, it strives to take full advantage of the potential of nature restoration and nature-based solutions, to deliver multiple social, economic and environmental co-benefits.

Consolidating biodiversity knowledge for nature and society

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-01-BIODIV-01: Additional activities for the European Biodiversity Partnership: Biodiversa+

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 60.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 60.00 million.
<i>Type of Action</i>	Programme Co-fund Action
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The proposal must be submitted by the coordinator of the consortium of</p>

	the grant funded under HORIZON-CL6-2021-BIODIV-02-01 and HORIZON-CL6-2023-BIODIV-01-18. This eligibility condition is without prejudice to the possibility to include additional partners.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The evaluation committee will be composed partially by representatives of EU institutions.</p> <p>If the proposal is successful, the next stage of the procedure will be grant agreement amendment preparations.</p> <p>If the outcome of amendment preparations is an award decision, the coordinator of the consortium funded under HORIZON-CL6-2021-BIODIV-02-01: European partnership rescuing biodiversity to safeguard life on Earth will be invited to submit an amendment to the grant agreement, on behalf of the beneficiaries.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>This action is intended to be implemented in the form of an amendment of the grant agreement concluded pursuant to topic HORIZON-CL6-2021-BIODIV-02-01.</p> <p>For the additional activities covered by this action:</p> <ul style="list-style-type: none"> • The funding rate is 30% of the eligible costs. • Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. • Financial support provided by the participants to third parties is one of the primary activities of this action in order to be able to achieve its objectives. The EUR 60 000 threshold provided for in Article 207(a) of the Financial Regulation No 2024/2509 does not apply. • The maximum amount of FSTP to be granted to an individual third party is EUR 7 000 000 for the whole duration of Horizon Europe ⁴⁷. This amount is justified since provision of FSTP is one the primary activities of this action and it is based on the extensive experience under predecessors of this partnership. <p>The starting date of grants awarded under this topic may be as of the</p>

⁴⁷ However, if the objectives of the action would otherwise be impossible or overly difficult (and duly justified in the proposal) the maximum amount may be higher

	submission date of the application. Applicants must justify the need for a retroactive starting date in their application. Costs incurred from the starting date of the action may be considered eligible (and will be reflected in the entry into force date of the amendment to the grant agreement).
<i>Total indicative budget</i>	The total indicative budget for the topic is EUR 60 million committed in annual instalments over years 2025-2027 (EUR 20 million from the 2025 budget, EUR 20 million from the 2026 budget and EUR 20 million from the 2027 budget).

Expected Outcome: The third instalment of the partnership is expected to further contribute to the expected outcomes specified in topics HORIZON-CL6-2021-BIODIV-02-01 and HORIZON-CL6-2023-BIODIV-01-18, for continuation of the activities in line with already agreed outcomes. In addition, during the third instalment, the partnership is also expected to contribute to the objectives of the EU Nature Restoration Regulation and of the European Climate Law.

Scope: The objective of this action is to continue to provide support to the European Biodiversity Partnership Biodiversa+ identified in the Horizon Europe Strategic Plan 2021-2024 and implemented under the previous topics HORIZON-CL6-2021-BIODIV-02-01 and HORIZON-CL6-2023-BIODIV-01-18, and in particular to fund additional activities (which may also be undertaken by additional partners) in view of its intended scope and duration, and in accordance with Article 24(2) of the Horizon Europe Regulation. It is expected that the partnership's additional activities will contribute to the objectives of the EU Nature Restoration Regulation and of the European Climate Law by developing innovative solutions for the restoration of ecosystems that can maintain and enhance natural carbon sinks and by further developing nature-based solutions and ecosystem-based adaptation measures.

The consortium which applied to and received funding under HORIZON-CL6-2021-BIODIV-02-01 and HORIZON-CL6-2023-BIODIV-01-18 is uniquely placed to submit a proposal to continue the envisioned partnership. Not only did this consortium submit the proposal leading to the identification of the partnership in the Horizon Europe strategic planning 2021-2024, it has also implemented the partnership through co-funded annual calls in years 2021-2024 based on this planning and further to topics HORIZON-CL6-2021-BIODIV-02-01 and HORIZON-CL6-2023-BIODIV-01-18. In this context, the current consortium has particular expertise in relation to the objectives of the Partnership, the activities to be implemented in particular FSTP calls or other calls/scope of calls clearly required/envisioned pursuant to initial proposal/partnership, and other relevant aspects of the action. In practice, another consortium could not continue the activities of the Partnership underway without significant disruption to the ongoing activities, if at all.

The scope of the application for this call on the European Biodiversity Partnership Biodiversa+ should focus on the flagship programmes 2025-27 according to the partnership's co-created strategic research and innovation agenda for seven years, which includes calls for

research projects, biodiversity- and ecosystems monitoring and science-based policy advisory activities, and all horizontal activities to allow the Partnership to operate and to achieve its five specific objectives.

It is expected that the partnership continues to organise joint calls on an annual base and therefore it should factor ample time to run the co-funded projects. It should build on, and widen, the data availability in European Research Infrastructures federated under the European Open Science Cloud.

The partnership should collaborate closely with the EC Knowledge Centre for Biodiversity and the Science Service project BioAgora. The partnership should also seek to collaborate with EU space programmes (Copernicus, Galileo) to foster the use of emerging or operational space technologies for policy development. Moreover, the partnership should describe specific activities foreseen in order to strengthen the complementarities with other related Missions and Partnerships.

While the award of a grant to continue the Partnership in accordance with this call should be based on a proposal submitted by the coordinator of the consortium funded under HORIZON-CL6-2021-BIODIV-02-01 and HORIZON-CL6-2023-BIODIV-01-18, and the additional activities (which may include additional partners) to be funded by the grant should be subject to an evaluation, this evaluation should take into account the existing context and the scope of the initial evaluation as relevant, and related obligations enshrined in the grant agreement.

Taking into account that the present action is a continuation of topic HORIZON-CL6-2021-BIODIV-02-01 and HORIZON-CL6-2023-BIODIV-01-18, and foresees an amendment to an existing grant agreement, the proposal should also present in a separate document the additional activities and any additional partners to be covered by the award in terms of how they would be reflected in the grant agreement.

The partnership should pool the necessary financial resources from the participating national (or regional) research programmes with a view to implementing joint calls for transnational proposals resulting in grants to third parties.

HORIZON-CL6-2025-01-BIODIV-02: Strengthening the capacity of citizen science in biodiversity observation

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.

<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁴⁸.</p>

Expected Outcome: In supporting the implementation of the European Green Deal, the EU biodiversity strategy for 2030 and the EU Nature Restoration Regulation, which contributes to the EU's overarching objectives on climate mitigation and adaptation, the successful proposal will deliver on the impact of this Destination on improved knowledge, innovations, methods, pathways and tools to protect healthy ecosystems and to restore degraded ones ensuring the provision of ecosystem services. It will thus contribute to the objectives of the European Climate Law on nature-based solutions and ecosystem-based adaptation.

Project results are expected to contribute to all of the following expected outcomes:

- capacity for citizen engagement in biodiversity observation is enhanced and contributes to the development of climate change mitigation and adaptation measures at local level;
- citizen science initiatives on biodiversity are promoted and coordinated by citizen science experts (taxonomy, genomics, IT, education and communication experts) and their outputs better harmonised;
- citizen science approach is better integrated in taxonomic networks and communities, supporting modern taxonomic research and resolution of pressing ecological challenges;
- systematic biodiversity observation is established (including citizen science and environmental observations), covering also little-known taxonomic groups and going beyond what the current policy is covering. Specifically, the possibilities of using citizen science data for monitoring ecosystem dynamics in time and for modelling the effects of the drivers of biodiversity loss, notably climate change, on species distribution are enhanced.

Scope: Citizen science is key to gather in situ biodiversity data, which complement official/national data collection programmes. The role of European citizens, including young people, in the generation of knowledge on biodiversity, ecosystems and their provision of essential ecosystem services to society needs to be strengthened on the basis of best practices.

⁴⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

There are hundreds of citizen science initiatives across the European Union, managed and/or funded by EU, national or regional authorities, NGOs, municipalities and others. Data are not always collected and/or presented in a harmonised way, preventing their best use. Many lesser-known species are overlooked, as well as some opportunities (e.g. collaboration with key stakeholders such as farmers, foresters, fishers, hunters, urban planners). A coordinated approach, at the level of the EU, is necessary to tackle some specific issues such as challenges in nature management, state of plant health, spread of invasive alien species, changes in species distribution or migrations due to climate change or as result of human activity (e.g., transport, agriculture, industrial production).

Activities under this topic are expected to:

- analyse all tools available for citizen science on biodiversity (taxonomy fiches, schoolkits, App, use of e-DNA kits, artificial intelligence, etc), collect best practices and propose/identify, if necessary, new ones in collaboration with taxonomy, genomics, IT, education and communication experts;
- develop strategies, roadmaps and guidelines and test them to scale up citizen engagement in biodiversity observation, including a review of good practices for setting up a system of incentives to attract and retain citizen interest. The development and tests on the ground should be based on tools and protocols for data quality assessment, control and validation, consider data need scenarios (e.g. types of data used by Environmental Authorities and bodies providing scientific advice to policy makers on environmental aspects) and involve potential users (e.g. schools, stakeholders, young citizens, NGOs, civil society organisations as well as hard-to-reach and vulnerable citizens/groups);
- develop outreach activities and materials on the crucial importance of biodiversity and biodiversity observation for climate change mitigation and adaptation;
- identify frameworks for harmonisation and standardisation of citizen science protocols for data collection, validation, storage and sharing, as well as frameworks for interoperability of various digital tools (e.g. smart phone applications) used by citizen scientists. Attention should be paid to metadata and accessibility and transparency with regard to reference documentation, taking into account the multilingual nature of citizen science activities. Cyber security and personal data protection aspects should be considered;
- explore avenues to streamline development of essential resources for setting up and running citizen science initiatives, including kits for collection of biodiversity data, promotion and awareness raising toolkits, training schemes, applications, multilingual protocols and participation certification for diverse target groups including children and young people.

The support and early involvement of citizens and civil society is central to achieving the targeted outcomes. The proposals should focus on all potential groups of stakeholders and citizens including vulnerable groups, such as young people (including those not in education

or employment), elderly people, migrants, ethnic minorities, pregnant women, and persons with disabilities.

It is expected that the proposed activities cover terrestrial, freshwater and marine environments, and that the activities will contribute to the objectives of the EU Nature Restoration Regulation and thereby also to climate change mitigation and adaptation objectives.

The proposal should foresee cooperation with the European Biodiversity Partnership Biodiversa+, the EC Knowledge Centre for Biodiversity and the Science Service project BioAgora. The proposal should also foresee cooperation with the European Alien Species Information Network (EASIN), the upcoming pilot on the EU Biodiversity Observation Coordination Centre (EBOCC), national biodiversity monitoring hubs, and national statistical offices to explore and advance the collection of citizen science observations.

The selected project should coordinate with other projects working on citizen science for biodiversity⁴⁹, the European Citizen Science platform⁵⁰ and relevant organisations as the European Citizen Science Association (ECSA), to ensure the exhaustive overview of all citizen science initiatives across the EU.

The selected project is also expected to collaborate with the projects selected under the topics HORIZON-CL6-2025-01-BIODIV-03: Strengthening taxonomic approaches for biodiversity and HORIZON-CL6-2025-01-BIODIV-04: Large-scale in situ biodiversity observations for better understanding of biodiversity state, drivers of its decline and impacts of policies.

The use of AI could be considered for the analyses needed under this topic.

HORIZON-CL6-2025-01-BIODIV-03: Strengthening taxonomic approaches for biodiversity

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 24.00 million.
<i>Type of Action</i>	Research and Innovation Actions

⁴⁹ Projects funded under the topics HORIZON-CL6-2021-BIODIV-01-02, HORIZON-CL6-2021-BIODIV-01-03, HORIZON-CL6-2022-BIODIV-01-01. See also relevant EU projects funded under the EU Missions, in particular “Soil Deal for Europe” (e.g. HORIZON-MISS-2022-SOIL-01-09), “Restoring our ocean and waters by 2030” (e.g. HORIZON-MISS-2024-OCEAN-01-04), “Adaptation to Climate Change” and “Climate-neutral and smart cities”.

⁵⁰ <https://eu-citizen.science/>.

<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio, grants will be awarded to applications not only in order of ranking but at least also to one project within the area A that is the highest ranked, and one project highest ranked within the area B, provided that the applications attain all thresholds. Proposals must clearly indicate the area they are applying to.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000 ⁵¹.</p>

Expected Outcome: In supporting the implementation of the European Green Deal, the EU biodiversity strategy for 2030 and the Kunming-Montréal Global Biodiversity Framework, successful proposals will contribute to the impact of this Destination on improved knowledge, innovations, methods, pathways and tools to protect healthy ecosystems and to restore degraded ones ensuring the provision of ecosystem services, including for adaptation and/or mitigation to climate change, thus contributing to the objectives of the European Climate Law on nature-based solutions and ecosystem-based adaptation.

Project results are expected to contribute to all the following expected outcomes:

- the taxonomic community (experts who identify, name, describe, and classify biodiversity working from the level of molecules, including eDNA and eRNA, genomes and metagenomes, species and populations, to habitats and ecosystems) and its capacity to engage with and support policy and other decision-making on biodiversity, climate change and other environmental issues are strengthened;
- strategic approaches for a systematic reinforcement of expertise and training of the taxonomic community in Europe, including genomics for biodiversity identification and monitoring are developed.

Scope: R&I activities should:

- fill gaps in taxonomic expertise, including in the context of intra-species biodiversity (genetic diversity within and between populations) and habitats/ecosystems;
- establish, pilot and test novel taxonomic approaches on observing and quantifying biodiversity at all levels;

⁵¹ However, if the objectives of the action would otherwise be impossible or overly difficult (and duly justified in the proposal) the maximum amount may be higher

- develop strategies and roadmaps for systematic capacity building and transfer of taxonomic knowledge;
- compile a comprehensive open online catalogue of taxonomic and nomenclatural databases, and encourage the existing databases to align with common standards and FAIR principles, to merge where possible, and to link with or mirror each other. This catalogue should be designed to support the process of taxonomic identification, covering a wide range of databases from genetic information to species classification⁵², and support a common European Taxonomy Initiative contributing to the Global Taxonomy Initiative;
- support development of tools to facilitate taxonomic training, such as reference collections, guidelines, standards and schemes for academic certification (e.g. within the European Credit Transfer and Accumulation System ECTS);
- establish an EU network of taxonomy and genomics experts, from taxonomic facilities to universities, including an interconnected network of biodiversity genomics facilities⁵³;
- ensure representative coverage of biodiversity across terrestrial, freshwater, and marine ecosystems, including lesser-known taxa and ecosystems and with regard to such taxa and ecosystems that act as climate change indicators, recognising the critical role that biodiversity and ecosystem services play in climate change mitigation and adaptation.

Proposals should address either Area A or Area B as follows:

Area A:

- integrate and maximise the impact of taxonomic work across the different stages of biodiversity identification, description, curation, publication, digitalization and management, to the scale needed at national and European level;
- consolidate and underline the taxonomic ground for long-term monitoring efforts based on expert knowledge and activity, and the use of advanced and validated tools.

Proposals may provide financial support to third parties, to cover specific needs/taxa/ecosystems and/or issues. These third party grants should focus on the most pressing and identified knowledge gaps, by reinforcing taxonomy notably in expertise and data lacking areas such as in Central and East European, Mediterranean and outermost regions. Maximum 30% of the requested EU contribution should be allocated to this purpose.

Area B:

⁵² Including nomenclatural databases such as the International Plant Names Index (IPNI), Zoobank, Algaebase and Mycobank.

⁵³ Associated Countries can participate in the network.

- widen participation and accessibility of genomic data, increase geographical coverage and scale of participation, whilst engaging in training and knowledge transfer, including links with non-genomic data (“from molecules to ecosystems approach”);
- consolidate and enhance the uptake / use / impact of genomic data as more and better-quality data become available to support environmental management, environmental risk assessment and sustainable use of natural resources;
- establish a comprehensive biodiversity genomics system in Europe, based on latest progresses, particularly in DNA barcoding and whole-genome sequencing through participation in the International Barcode of Life (iBOL) and the Earth BioGenome Project.

Proposals may provide, when relevant, financial support to third parties to cover specific needs/taxa/ecosystems and/or issues related to the use of genomic data. These third party grants should focus on the most pressing and identified knowledge gaps, by reinforcing genomic taxonomy notably in expertise and data lacking areas such as in Central and East European, Mediterranean and outermost regions. Maximum 30% of the requested EU contribution should be allocated to this purpose.

Proposals should foresee cooperation with the EC Knowledge Centre for Biodiversity and the Science Service project BioAgora.

Proposals should use existing platforms and information sharing mechanisms relevant to the topic and build on results from relevant projects including TETTRIs, BGE and EuropaBON⁵⁴. The proposals should foresee close collaboration with the other project selected under this topic and collaboration with the projects selected for topics HORIZON-CL6-2025-01-BIODIV-02: Strengthening the capacity of citizen science in biodiversity observation and HORIZON-CL6-2025-01-BIODIV-04 on large-scale biodiversity observations.

Proposals should coordinate and collaborate with relevant organisations such as the Consortium of European Taxonomic Facilities (CETAF), the Global Biodiversity Information Facility (GBIF) and with the European Alien Species Information Network (EASIN) and the upcoming pilot on the EU Biodiversity Observation Coordination Centre (EBOCC). The proposals should also connect to existing global and European biodiversity data infrastructures including the Catalogue of Life (COL), DiSSCo, LifeWatch ERIC, EMBRC, eLTER and MIRRI-ERIC⁵⁵, where relevant. The activities should cover also alien species, thereby contributing to the implementation of the Invasive Alien Species Regulation.

⁵⁴ Other relevant projects are BIOCEAN5D, MARBEFES, OBAMA-NEXT, MARCO-BOLO and DiverSea and the project funded under Area A of HORIZON-CL6-2024-BIODIV-01: Digital for Nature.

⁵⁵ And any other relevant research infrastructure prioritised by the European Strategy Forum on Research Infrastructures (ESFRI). The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

Concrete efforts should be made to ensure that the data produced in the context of the funded projects is FAIR (Findable, Accessible, Interoperable and Re-usable), particularly in the context of real-time data feeds, exploring workflows that can provide “FAIR-by-design” data, i.e., data that is FAIR from its generation. Possibilities offered by the European Open Science Cloud (EOSC) to store and give access to research data should be considered.

Citizen science approach is encouraged as research methodology at all stages of the research activities in addressing both Area A and Area B. Citizen science activities should follow a R&I approach in line with disciplinary/sectoral standards, including for the data and knowledge generation.

International cooperation is encouraged, in particular with countries and partners that support global efforts such as the Global Taxonomy Initiative, iBOL, GBIF and COL.

The use of AI could be considered for the analyses needed under this topic.

HORIZON-CL6-2025-01-BIODIV-04: Large-scale in situ biodiversity observations for better understanding of biodiversity state, drivers of its decline and impacts of policies

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 11.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 22.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.

Expected Outcome: In supporting the implementation of the European Green Deal, and in particular the EU biodiversity strategy for 2030, successful proposals will contribute to the impacts of this destination, notably to a better understanding of the ongoing biodiversity crisis and its consequences, the benefits of ecosystem services and the need to protect and restore them. Successful proposals are expected to support the implementation of the EU Nature Restoration Regulation and of the European Climate Law which requires Member States to promote nature-based solutions and ecosystem-based adaptation.

Project results are expected to contribute to all of the following expected outcomes:

- competent authorities in charge of the design and implementation of biodiversity policies at all levels have more high-quality data and information from in situ biodiversity observations to understand the biodiversity state and trends in the EU and in Associated Countries;
- more high-quality data and information from in situ biodiversity observations is available to evaluate the effectiveness (in terms of biodiversity related objectives) of policies and business activities and for applied research and innovation.

Scope: The EU biodiversity strategy for 2030 sets the following targets for 2030: significant areas of degraded and carbon-rich ecosystems are restored; habitats and species show no deterioration in conservation trend and status, and at least 30% reach favourable conservation status or at least show a positive trend. The EU Nature Restoration Regulation establishes a framework within which Member States shall put in place effective and area-based restoration measures with the aim to jointly cover, as a Union target, throughout the areas and ecosystems within the scope of this Regulation, at least 20 % of land areas and at least 20 % of sea areas by 2030, and all ecosystems in need of restoration by 2050. At global level, the EU has taken commitments reflecting the EU targets with the Kunming-Montréal Global Biodiversity Framework. The European Climate Law requires Member States to promote nature-based solutions and ecosystem-based adaptation when preparing their adaptation strategies and plans, and therefore it is crucial to improve the knowledge of biodiversity status and trend to select the most appropriate adaptation measures at local level.

However, knowledge of the state and trends of biodiversity and ecosystems in the EU is insufficient to enable a robust measurement of progress towards the EU and global commitments and targets. To fill these knowledge gaps, robust data and information on species and habitats have to be generated in different climate zones. Large-scale in situ observations are essential to deliver such data and information with adequate quantity and quality. Besides improved understanding of the state of biodiversity and ecosystems, better in-situ data on species and habitats, coupled with other data sources, will also enable better identification and quantification of the effects of drivers of biodiversity decline, impacts of policy actions to mitigate those effects and overall progress made under the green transition. High-quality in situ data is also essential for building and updating reliable indicators and models, their validation and improvement, as well as the validation of newly developed observation techniques.

R&I activities should:

- prepare harmonised or standardised frameworks for the execution of biodiversity observations and apply state-of-the-art protocols of the utilised sampling techniques, in order to ensure the quality and interoperability and public access of the collected data. Particular attention should be paid to comprehensive and robust metadata. In particular a comprehensive coverage of the territory of EU Member States should be sought;

- undertake systematic large-scale in situ observations of biodiversity in order to a) record occupancy, richness and abundance of species and populations, b) map species, populations and habitats, and c) survey habitat composition and structure. In this regard, the activities should generate data of adequate spatial and temporal granularity spanning multiple geographical scales to capture the variability in biodiversity across different contexts. The activities should cover species and habitats in terrestrial, freshwater and marine ecosystems, including lesser-known taxa, ensuring a comprehensive understanding of biodiversity across diverse ecological and geographical settings;
- define the methodology for applying specific data quality checks;
- ensure that the collected data which is relevant for future projections are properly defined and fit for modelling (in particular in the context of the activities under HORIZON-CL6-2025-01-BIODIV-05);
- based on the undertaken observations:
 - o assess the state, geographical distribution, phenology and trends of observed species populations;
 - o assess the quality, structure, functions and geographical distribution of observed habitats;
 - o fill species and habitat data gaps in terms of geographical coverage in the EU and in Associated Countries, as well as the data gaps in terms of taxonomic coverage.

The use of AI could be considered for the analyses needed under this topic. Concrete efforts should be made to ensure that the data produced in the context of the funded project is FAIR (Findable, Accessible, Interoperable and Re-usable), exploring workflows that can provide “FAIR-by-design” data, i.e., data that is FAIR from its generation. Possibilities offered by the European Open Science Cloud (EOSC) and by relevant European research infrastructures including the Catalogue of Life (COL), DiSSCo, LifeWatch ERIC, EMBRC, eLTER and MIRRI-ERIC⁵⁶ to store and give access to research data could be considered where relevant.

Proposals may provide financial support to third parties (FSTP) to, for instance, undertake in-situ observation on specific habitats and species. A maximum of 30% of the EU funding should be allocated to this purpose. Consortia need to define the selection process of organisations, for which financial support may be granted.

Proposals should foresee cooperation with the EC Knowledge Centre for Biodiversity and the Science Service project BioAgora. Proposals should also show how the planned activities could provide timely information for consideration by the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES).

⁵⁶ And any other relevant research infrastructure prioritised by the European Strategy Forum on Research Infrastructures (ESFRI). The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

Projects will be asked to cooperate with projects that will be selected under the following topic under this call: HORIZON-CL6-2025-01-BIODIV-05: Assessing and modelling ecosystems' dynamic processes to guide restoration activities and to improve models used for climate.

Restoring ecosystems for resilient society and economy

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-01-BIODIV-05: Assessing and modelling ecosystems' dynamic processes to guide restoration activities and to improve models used for climate

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio, grants will be awarded to applications not only in order of ranking but at least also to one project within the area A that is the highest ranked, and one project highest ranked within the area B, provided that the applications attain all thresholds. Proposals must clearly indicate the area they are applying to.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the</p>

	Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁵⁷ .
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Expected Outcome: Successful proposals will contribute to the impacts of this destination by improving knowledge and developing modelling tools to guide the restoration of degraded ecosystems ensuring the provision of ecosystem services. It will thus contribute to the objectives of the European Climate Law (which requires Member States to promote nature-based solutions and ecosystem-based adaptation) and will improve knowledge to ensure that biodiversity and climate policies and their implementation are coherent, mutually supportive and provide co-benefits for sectoral policies.

Project results are expected to contribute to all the following expected outcomes:

- national competent authorities, decision makers and practitioners having to implement restoration activities benefit from updated knowledge and new tools based on modelling approaches;
- nature restoration is fully taken into account in the modelling frameworks used for climate and land use policies.

Scope: The EU biodiversity strategy for 2030 set the following targets for 2030: significant areas of degraded and carbon-rich ecosystems are restored; habitats and species show no deterioration in conservation trend and status, and at least 30% reach favourable conservation status or at least show a positive trend. The EU Nature Restoration Regulation establishes framework within which Member States shall put in place effective and area-based restoration measures with the aim to jointly cover, as a Union target, at least 20 % of land areas and at least 20 % of sea areas by 2030, and all ecosystems in need of restoration by 2050.

The use of models is expected to support national and EU competent authorities and stakeholders for the implementation of the EU Nature Restoration Regulation, in particular in the following areas:

- determination of the good conditions of habitats as defined in the Habitats directive and the good environmental status defined in the Marine strategic framework directive;
- establishment of threshold values for the favourable reference area for habitats and ecosystems covered by the EU Nature Restoration Regulation;
- estimate of ecological needs of species in terms of quantity and quality of their habitats and better understanding of links between habitats and ecosystems restoration and species conservation;

⁵⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- better understanding of connectivity, functionality, ecological coherence of Natura 2000 network and marine reserve network and competing needs of species;
- analysis of restoration pathways proposed by competent authorities to achieve the short term (2030) and long term (2040-2050) targets of the EU biodiversity strategy for 2030 and the EU Nature Restoration Regulation for all ecosystem types.

Proposals should either address Area A: main focus on terrestrial ecosystems, or Area B: main focus on marine ecosystems. The area (A or B) should be clearly indicated on the application.

For both areas, R&I activities should:

- develop a model as described above capable of simulating dynamic ecosystems processes, including interactions at different scale levels, based on literature review, available datasets or data-basis, realised restoration activities, on-going projects including demonstration cases, and existing guidance. The model should be able to estimate ecological reference values tailored to the specificity of ecosystems in different territories and in given contexts including under climate change, to assess proposed restoration pathways and to contribute to improve/expand other models;
- prioritise ecosystems corresponding to synergies identified between ecosystem restoration and one or several of the following areas: climate change mitigation, climate change adaptation, land degradation neutrality and disaster risk prevention;
- address data gaps with direct observation if needed;
- formulate practical guidelines or advice for practitioners about how to carry out restoration, including when dealing with invasive alien species;
- aim at improving and expanding models used for climate and land-use policies, by coupling modelling functionalities as described above.

Proposals should build on the results of relevant existing projects and envisage enough resources to collaborate with other selected projects under this topic to provide an effective integration of the generated models.

Proposals should build on the knowledge compiled in the assessment reports produced by the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES), including the IPBES scenarios and models assessment, and should show how the planned activities could provide timely information for consideration to future reports.

Concrete efforts should be made to ensure that the data produced in the context of the funded projects is FAIR (Findable, Accessible, Interoperable and Re-usable), particularly in the context of real-time data feeds, exploring workflows that can provide “FAIR-by-design” data, i.e., data that is FAIR from its generation. Possibilities offered by the European Open Science Cloud (EOSC) to store and give access to research data should be considered, including data from in-situ sensors and satellite-based Earth observations.

Citizen Science approach could be appropriate for this action to produce, collect and analyse data.

When dealing with models, actions should promote the highest standards of transparency and openness, as much as possible going well beyond documentation and extending to aspects such as assumptions, protocols, code and data that is managed in compliance with the previously mentioned FAIR principles.

This topic is part of a coordination initiative between ESA and the EC on Earth System Science (ESSI). Projects will be asked to cooperate with projects that will be selected under ESA's Future EO programme as well as under the following topics under this call: HORIZON-CL6-2025-01-BIODIV-04: Large-scale in situ biodiversity observations for better understanding of biodiversity state, drivers of its decline and impacts of policies and HORIZON-CL6-2025-01-BIODIV-06: Assessing and modelling socio-economic impacts of nature restoration. To this end, proposals should plan to allocate sufficient resources for effective coordination, with concrete cooperation activities to be defined at a later stage. Applicants are not expected to contact the ESA or ESA projects to prepare proposals.

Proposals should foresee cooperation with the EC Knowledge Centre for Biodiversity and the Science Service project BioAgora.

HORIZON-CL6-2025-01-BIODIV-06: Assessing and modelling socio-economic impacts of nature restoration

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 and 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Legal and financial set-up of the Grant</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the</p>

<i>Agreements</i>	Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁵⁸ .
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Expected Outcome: Successful proposals will contribute to the impacts of this destination by providing tools to assess the socio-economic impacts, including benefits and costs, of measures aiming at restoring degraded ecosystems ensuring the provision of ecosystem services, including for adaptation and/or mitigation to climate change.

Project results are expected to contribute to all the following expected outcomes:

- short, medium, and long-term socio-economic impacts, including benefits and costs, of nature restoration, along with their social and territorial distribution, are better known including by scientists and stakeholders of the public and private sectors;
- policy-makers have at their disposal science-based tools to predict impacts, including benefits and costs, of the implementation of policies aiming at restoring nature;
- stakeholders in charge of financing or implementing nature restoration have tools at their disposal to integrate impacts, including benefits and costs, of nature restoration in their business plans;
- socio-economic benefits and costs are traceable directly to the intervention or the origin of stressor, for instance reduction of pollution input.

Scope: The EU biodiversity strategy for 2030 set the following targets for 2030: significant areas of degraded and carbon-rich ecosystems are restored; habitats and species show no deterioration in conservation trend and status, and at least 30% reach favourable conservation status or at least show a positive trend. The EU Nature Restoration Regulation sets binding targets for 2030 and 2050, with an incremental implementation. The European Climate Law requires that policies on adaptation in the Union and in Member States are coherent, mutually supportive, provide co-benefits for sectoral policies, and work towards better integration of adaptation to climate change in a consistent manner in all policy areas, including relevant socioeconomic and environmental policies and actions.

R&I activities are expected to:

- conduct sector-specific assessments to measure the comprehensive economic and social (including employment) impacts and benefits of nature restoration, including their territorial and social distribution, encompassing both the financial effect of economic activities and the non-market benefits (including climate mitigation and adaptation,

⁵⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

health and well-being benefits) derived from ecosystem services including provisioning, regulating and cultural services as well as nature's contribution to people;

- employ a multidisciplinary approach combining at least expertise in economics, ecology, social sciences, geography, sustainability and environmental science as well as system and complexity science to capture the full range of impacts and benefits;
- develop and validate modelling approaches, that can build on existing environmental and socio-economic models, to analyse the economic, social and employment impacts and benefits of nature restoration, including their territorial and social distribution, integrating also biodiversity, ecosystem services and nature's contribution to people good quality of life including food security;
- enable understanding of the incremental progress in nature restoration between the 2030 and 2050 target years to guide public and private stakeholders in their continued actions through quantification of socio-economic benefits and impacts of individual measures;
- improve the understanding of the possibilities and limitations of tools for socio-economic assessments of nature restoration, particularly with regard to the non-market benefits.

Proposals should build on results of past and on-going projects and on the knowledge compiled in the assessment reports produced by the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES), including the IPBES values assessment and the IPBES scenarios and models assessment.

This topic requires the effective contribution of SSH disciplines, including economics, socio-economics, geography and sociology. It is essential to involve SSH experts and institutions, as well as incorporate relevant gender expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Concrete efforts should be made to ensure that the data produced in the context of the funded projects is FAIR (Findable, Accessible, Interoperable and Re-usable), particularly in the context of real-time data feeds, exploring workflows that can provide “FAIR-by-design” data, i.e., data that is FAIR from its generation.

Proposals should envisage enough resources to collaborate with other selected projects under this topic to provide an effective integration of the models generated. Projects will be asked to cooperate with projects that will be selected under the following topics under this call: HORIZON-CL6-2025-01-BIODIV-05: Assessing and modelling ecosystems' dynamic processes to guide restoration activities and to improve models used for climate and HORIZON-CL6-2025-01-BIODIV-10: Supporting the implementation of nature restoration measures for sustainable farming systems.

Proposals should foresee cooperation with the EC Knowledge Centre for Biodiversity and the Science Service project BioAgora.

HORIZON-CL6-2025-01-BIODIV-07: Integrated and coordinated approaches for coral reefs and associated ecosystems (mangroves and seagrass beds) conservation, restoration, and climate mitigation and adaptation

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The following additional eligibility criteria apply: due to the specific challenge of this topic, in addition to the minimum number of participants set out in the General Annexes, consortia must include, as beneficiaries, at least three independent legal entities, each established in a different Least Developed Country ⁵⁹ and/or Small Island Developing State ⁶⁰.</p> <p>All international organisations are exceptionally eligible for funding.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁶¹.</p>

⁵⁹ [LDCs at a Glance | Department of Economic and Social Affairs \(un.org\)](#)

⁶⁰ [List of SIDS | Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States](#)

⁶¹ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/lis-decision_he_en.pdf

Expected Outcome: In line with the EU biodiversity strategy for 2030, the Kunming-Montreal Global Biodiversity Framework and the EU climate adaptation strategy, successful proposals will contribute to the impacts of this Destination, notably to protect healthy ecosystems and to restore degraded ones ensuring the provision of ecosystem services, including for adaptation and/or mitigation to climate change. The research will contribute to the objectives of the European Climate Law, which requires Member States to promote nature-based solutions and ecosystem-based adaptation.

Project results are expected to contribute to all of the following expected outcomes:

- increased protection, restoration, and resilience of coral reefs and associated ecosystems in both protected and non-protected areas, acknowledging the objectives of the EU Nature Restoration Regulation, the climate change mitigation and adaptation strategies;
- effective management and land-sea planning of those associated ecosystems are based on approaches considering them together and integrating field experience with state-of-the-art and indigenous populations & local communities (IPLC) knowledge into hands-on guidelines;
- international initiatives are supported in the effort to coordinate and reduce the fragmentation of the current landscape of interventions and resources for the conservation and management of these ecosystems. The capacity for a durable intervention is built in outermost regions, overseas countries and territories of the EU and in third countries, in particular Least Developed Countries and Small Island Developing States.

Scope: Coral reefs and seagrass beds represent about less than 1% of the ocean's surface and mangrove cover about 1%. They are home to at least 25% of known marine species and supporting up to 40% of fish species of the global ocean through food webs and nutrients cycles. About half of the coral reef ecosystems have disappeared since the 1950's, 29% of the known areal extent of seagrass has disappeared since the initial records from 1879 and about 35% of the original mangrove area was lost by the end of the 20th century, as consequences of direct drivers at play for the past decades (pollution, extraction, overfishing, harmful fishing practices, coastal development, deforestation), invasive alien species and now additionally from increasing climate change impacts (rising sea surface temperature, marine heatwaves, sea level rise, deoxygenation, acidification, etc.). Providing multiple ecosystems services and benefits for people, research, conservation and management efforts have increased in the recent years but often targeted these systems individually, with various duration and focus and long-term observation and management.

Where they co-occur, coral reefs (including mesophotic extensions), mangroves and seagrass beds share tight ecological connections. Recent observations during coral bleaching events suggest that jointly protecting mangroves, seagrasses, and reefs may synergistically increase the success and benefits of conservation due to positive feedback at habitat boundaries. However, an integrated land-sea planning and management remain challenging because of

knowledge gaps in their functional ecology and connectivity, in the spatial extents of their interactions, their seasonal patterns, the socio-political decision-making contexts for local / national planning at sea or on land, and the scarce access to knowledge, experience and to spatial data. Most of past and ongoing interventions are isolated from one another, displaying a fragmented landscape in terms of approaches, of targets, of resources and by limited recognition and inclusion of IPLCs traditional stewardships of these coastal ecosystems. Based on IUCN protected area dataset, only 18% of coastline where mangroves, seagrasses, and reefs interact are protected. Nevertheless, these data set underrepresents areas managed by IPLCs, which manage or have tenure rights over at least ~38 million terrestrial km2 worldwide.

In particular, proposals should:

- where shallow coral reefs (including mesophotic extensions), mangroves, and seagrasses coexist and interact: provide an improved understanding of the functional ecology, their species assemblages' and communities, their connectivity through life cycle stages and food webs structures and complexity in the healthy functioning and co-evolutionary processes of these ecosystems and in the biogeochemistry of sediments and their impact on climate change mitigation and adaptation, in order to design and inform effective management and restoration measures;
- look particularly at functional groups in maintaining the health, as well as the potential of adaptation to changes of corals assemblage, mangrove and sea grass beds, in particular top predators, reef sharks and species controlling algae proliferation and possible IAS and climate change. Proposals may also look at the role of the microbiome, periphyton or symbionts associated to shallow and mesophotic corals ecosystems healthy functioning;
- better understand the consequences of loss of coral reefs (including mesophotic extensions) and associated ecosystems, both in terms of coverage and diversity, on food web locally and cascading on distant communities and of socioeconomic impacts;
- combine different scientific disciplines, and where relevant, possible active restoration measures (coral cuttings or larval propagation on the reef or artificial structures, fishing management, acoustic assisted fish recruitment in restored areas, etc.), for developing approaches for their effective management and restoration, based on functional targets, (departing from usual approach focusing on a single species and coral cover or biomass), so as to support coral reefs and associated ecosystems, mangroves & seagrass beds complexity and connectivity as best asset for their (climate) resilience, co-evolutionary processes and adaptation potentials;
- jointly develop management and restoration guidelines with IPLCs knowledge, state of the art science and integrating lessons learnt and legacy from past and ongoing relevant initiatives from research to aid projects at regional, national, EU (such as the FPI Governance MPA Atlantic & Southeast Asia or the BEST initiative - Biodiversity and Ecosystem Services in Territories of European overseas) or international levels and

consolidate a community of practice in socio-ecological management in networks of protected area managers and locally managed marine areas;

- guidelines should also be going beyond local objectives, considering the trophic and life traits connectivity and with special attention to future climate and abiotic conditions;
- contribute to the coordination and capacity building activities of relevant international initiatives and frameworks, in the design and dissemination of actionable knowledge and guidelines to relevant stakeholders; develop training materials, capacity building and empowerment tools, the access to data and scientific expertise to local actors for ecosystems description and the development of ad hoc localised management measures;
- develop or integrate means and methods (such as sensors, in situ observation devices, remote sensing products developments, citizen science data, etc.) for a cost effective, accessible and lasting monitoring of these functionally associated ecosystems in order to inform on their status, on the effect of measures and to identify necessary management adjustments to changes;
- support natural capital valuation for cost/benefit analysis of measures of conservation and restoration for coral reefs and associated ecosystems and the services and benefits they provide (food, cultural & social values, nature-based solutions for coastal resilience, protection against extreme events, climate adaptation, etc.) and how they affect fishing, shipping, local tourism or other programmes for sustainability, such as offshore wind.

Proposals should envisage clustering activities with projects funded under this topic as well as with other relevant international or Horizon Europe and Horizon 2020 projects working on links between marine biodiversity, functional ecology, ecosystem services, socio-ecological management, cumulated impact of multiple stressors and on observation, mapping, and monitoring for application to the protection and restoration targets. To this end, proposals should foresee dedicated tasks and appropriate resources for coordination measures, joint activities, and deliverables.

Proposals should ensure adequate involvement of researchers, Local Communities and Indigenous People, end-users, MPA managers or governance levels relevant to inform, support and implement measures, actors contributing to practical and ready to use knowledge, tools and freely accessible dissemination and capacity building channels.

Proposals should foresee cooperation with the EC Knowledge Centre for Biodiversity and the Science Service project BioAgora. Proposals should also show how the planned activities could provide timely information for consideration by the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES) and in particular the IPBES assessment on integrated biodiversity-inclusive spatial planning and ecological connectivity expected to be delivered in late 2027.

This topic requires the effective contribution of SSH disciplines and involvement of SSH experts. International cooperation is encouraged.

Transformative change towards a nature positive economy

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-01-BIODIV-08: Strengthening pathways to alternative socio-economic models for continuous improvement of biodiversity

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 14.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>

Expected Outcome: In line with the European Green Deal priorities providing for a fair and just green transition, in particular the EU biodiversity strategy for 2030 and the EU Nature Restoration Regulation, which contributes to the EU's objectives on climate adaptation and mitigation, as well as the Kunming-Montréal Global Biodiversity Framework (GBF), successful proposals will contribute to the impacts of this Destination, notably to grow understanding of the biodiversity crisis and ecosystem services, leading policymakers and society to recognise the importance of protecting and restoring biodiversity, driving a path towards transformative change.

Project results are expected to contribute to all of the following expected outcomes:

- new knowledge to develop and accelerate pathways towards best available alternative socio-economic models that support biodiversity restoration and protection. These models should include adaptive legislative, governance, education and financing strategies, with potential applications of Generative AI to enhance research;
- decision makers (e.g. policy makers and public/private strategic decision makers) benefit from synthesised, systematised and prioritised knowledge on models that better integrate values of biodiversity and nature. Including valuation methods for assessing the benefits of restoration measures and the socio-economic distribution of impacts, tools and innovative market and governance instruments (e.g. potential incentives/capacity-

building, including possible use of Generative AI-based tools), the application of environmental, social and ethical safeguards, and ensuring that biodiversity is continuously improved (e.g. through the non-deterioration principle) and to enhance community resilience to climate change;

- decision makers will have at their disposal information, tools, assessment strategies and metrics that allow for the continuous improved protection and restoration of biodiversity, alongside climate resilience, especially through enhanced climate adaptation. These should be integrated into socio-economic analytical frameworks, considering the quantitative and qualitative representation of social and economic variables in the short (up to 1 year), medium and long (5+ years) term, of the implications of applying such frameworks.

Scope: The degradation of natural assets due to human activities, including climate change, emissions to air, water, and soil and land use intensification and change in Europe, and the subsequent cascading effects of biodiversity loss, have profound economic and social implications, including for our standards of living and immaterial aspects of quality of life. Biodiversity loss is increasingly recognised as a risk to macroeconomic and financial stability, affecting key institutions, countries and regions. Protecting and restoring ecosystems not only benefits biodiversity but also contributes to broader socio-economic objectives, such as human health and wellbeing, climate resilience, and particularly climate adaptation.

To address these trends, alternative socio-economic models can integrate biodiversity efforts into economic activities. The EU biodiversity strategy, GBF, and SDGs set ambitious biodiversity targets, but achieving them requires overcoming barriers in education, technology, society, economy, and governance. Numerous socio-economic models exist to achieve the necessary ecological, climate, economic, financial and social transition for biodiversity. These models need further analysis and development to be widely accepted and implementable. They play a key role in the transformative change called for by IPBES towards a nature positive society, for example through the deployment of nature-based solutions.

To contribute effectively to transformative change, it is crucial to deepen our understanding of the pathways to alternative socio-economic models. This includes better valuing the economic and social benefits that nature protection and restoration bring, beyond monetary valuation, and assessing the cost of inaction. Where possible, the actions should incorporate both quantitative and qualitative research, and the use of Generative AI could integrate new socio-economic data, aiding in model interpretation and action implementation.

In particular, actions are expected to:

- analyse existing models: evaluate and prioritise existing alternative socio-economic models related to biodiversity protection and restoration, identifying best practices and assessing their impacts across Europe. This analysis should explore pathways for future development and implementation of these models, aiming to generate the most positive

biodiversity outcomes, while also promoting climate resilience, social equity and community well-being;

- analyse barriers: Identify and propose solutions to overcome potential barriers and obstacles in scaling up the best available models. This includes considering the potential of Generative AI to enhance model implementation and effectiveness;
- identify gaps and build capacity: pinpoint gaps in current research, innovation, skills, education, legislation and technology. Propose capacity-building strategies to address these gaps, ensuring that the necessary infrastructure and knowledge are in place to support the widespread adoption of effective and fair socio-economic models;
- advance valuation methods: Build on previous research, notably incentive mechanisms and natural capital valuation methods (both monetary and non-monetary), to make progress towards standardised, widely accepted indicators. These indicators should reflect broader socio-economic, biodiversity and natural capital benefits as well as trade-offs. A reflexive use of valuation methods is encouraged, considering the ethical and social implications of different valuation approaches;
- develop and pilot strategies: using collaborative and participatory approaches, develop and pilot strategies, scenario methods, market and non-market measures, instruments, and approaches to scale-up the implementation of alternative socio-economic model.
- co-design pathways: work with stakeholders, including decision-makers, to co-design pathways towards the implementation of alternative socio-economic models. Develop innovative technologies and tools to support scenarios that capture the specificities of different ecosystems, ensuring that models are adaptable and responsive to the unique challenges faced by various regions and sectors.
- engage stakeholders: actively involve end-users such as policy and decision makers and citizens in the co-creation process. This could include the use of Generative AI-based tools to fully account for diverse views and needs, facilitating broader acceptance and application of the proposed models.
- disseminate knowledge: issue and disseminate recommendations, actionable knowledge and empowerment tools at European and possibly Member State levels. Explore synergies with other European initiatives, policies and strategies particularly those under the EU Green Deal, including various fiscal, financial and economic policies to help reach sustainability. Outcomes and findings should also be disseminated beyond the EU.
- investigate economic models: analyse how traditional economic models contribute to biodiversity loss, climate change and other socio-economic challenges, as well as the interactions between these challenges. Identify pragmatic actions and strategies to address these issues, considering the root causes of unsustainable practises, power imbalances and justice concerns.

Concretely, the project(s) should support the practical implementation of the EU biodiversity strategy and the GBF, providing evidence-based recommendations. Actions should build on synergies across multiple SDGs to deliver both direct and indirect biodiversity benefits, and leverage the knowledge compiled in IPBES assessment reports⁶². Actions should consider ethical implications throughout project lifecycles, ensuring that outcomes align with broader societal values and contribute to equitable and just transitions. Actions should address specific challenges faced by different ecosystems, especially vulnerable ecosystems (e.g. agriculture, forestry) and communities (e.g. rural areas, those facing socio-economic inequalities).

Proposals should create synergies with other relevant initiatives, particularly Horizon 2020 and Horizon Europe projects, and foresee clustering activities, through the dedication of appropriate resources. Proposals should foresee cooperation with the EC Knowledge Centre for Biodiversity and the Science Service project BioAgora.

Proposals should involve contributions from the social sciences (including economics, sociology and educational science) and humanities (SSH) disciplines.

HORIZON-CL6-2025-01-BIODIV-09: Understanding the perceptions of and improving communication on the biodiversity crisis and nature restoration benefits to sustain citizen engagement and democratic governance

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Legal and financial set-up of the Grant</i>	The rules are described in General Annex G. The following exceptions apply:

⁶² Including the IPBES values assessment, the IPBES scenarios and models assessment, the IPBES nexus assessment and the IPBES transformative change assessment.

<i>Agreements</i>	Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁶³ .
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Expected Outcome: Successful proposals will contribute to the expected impacts of this destination notably by identifying mechanisms to raise awareness on the biodiversity crisis and on opportunities of biodiversity protection and restoration including for climate mitigation and adaptation.

Project results are expected to contribute to all of the following expected outcomes:

- policy-makers at all levels better understand how different groups of stakeholders and citizens perceive the biodiversity crisis and its underlying conflicts, as well as the potential impacts of new policies in this area and in climate adaptation and mitigation. This leads to better-informed and more inclusive decision-making and policy implementation, based on the identification of tensions and opportunities;
- policy-makers at all levels are able to implement innovative forms of co-creation and deliberative processes involving citizens throughout the policymaking cycle in order to improve policy-making and eventually contribute to effective mobilisation for collective action in favour of nature restoration and protection, and climate mitigation and adaptation;
- all sectors of society understand the biodiversity crisis and the full extent of its impacts on their lives, including the interplay with climate change and the need for synergies with climate adaptation and mitigation; they understand the critical role of nature restoration in addressing these impacts and are empowered to contribute to it.

Scope: With the EU biodiversity strategy for 2030, the Kunming-Montréal Global Biodiversity Framework, and more recently the adoption of the EU Nature Restoration Regulation, the EU has taken strong commitments to address the challenges of the biodiversity crisis, in addition to the current efforts towards increasing resilience to climate change embedded in the EU climate policy. Strong scientific evidence supports the need to act, given the importance of biodiversity and ecosystems for society, economy and resilience.

However, as the debates for the negotiation of the EU Nature Restoration Regulation showed, there are different levels of understanding and different approaches towards challenges to be addressed among the EU society, which is increasingly polarised with activists and citizens engaged in nature protection (and more generally environment protection) on the one hand

⁶³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

and defenders of the status quo on the other hand. This has even led to local conflicts. While the engagement of activists is visible, little is known about how the rest of society values nature and what citizens think should be done for its protection and restoration.

R&I activities are expected to:

- conduct comprehensive research to better understand civil society's plurality of perceptions and understanding of the biodiversity crisis, its underlying conflicts and links with climate change, identifying key concerns and perspectives. The analysis should identify and quantify the relevance of stakeholder groups and population segments (e.g. based on gender, age, disability, socio-economic status, ethnic and/or cultural origins, etc. and their intersections) sharing similar perceptions and interests. This analysis should build on results of existing research on the relationship between people and nature, including relationship between nature and culture, historical and/or natural heritage, effects of experiences in nature on environmental attitudes and behaviour, etc. and on the report "Methodological assessment regarding the diverse conceptualization of multiple values of nature and its benefits, including biodiversity and ecosystem functions and services"⁶⁴ of the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES);
- address various cases such as stakeholders depending on nature and ecosystems for their professional activities, rural communities living in both protected and not protected areas, urban communities having limited contacts with nature, etc.;
- analyse the perception of various stakeholders towards the EU commitment to protect and restore ecosystems. In particular, investigate if the need to protect and restore nature is perceived as a top-down approach or if it is understood as a necessity for the benefit of society. Explore solutions to address such issues;
- drawing on experiences of citizen engagement around the climate transition and biodiversity crisis – such as for instance the Irish Citizen's Assembly on Biodiversity Loss⁶⁵ or local co-creation processes on sustainable transport⁶⁶ - pilot citizen engagement (case-studies) around ecosystem protection and restoration possibly with nature-based solutions, with the participation of public authorities who have the competence to implement the results of citizen deliberation, thus creating a pathway to implementation as well as a model for best practice;
- develop approaches for each identified group to enhance the communication and dissemination of knowledge regarding the biodiversity crisis and its implications, including on climate. These strategies should aim to improve the groups' understanding of the benefits of nature restoration and empower them to make informed decisions.

⁶⁴ <https://www.ipbes.net/the-values-assessment>.

⁶⁵ <https://citizensassembly.ie/citizens-assembly-on-biodiversity-loss/>.

⁶⁶ <https://mosaic-mission.eu/pilots/gothenburg>.

A multi-disciplinary approach involving relevant biodiversity expertise should be sought. In addition, this topic requires the effective contribution of SSH disciplines, including gender studies, and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals should involve public authorities with the legal competence to implement policy in biodiversity and nature restoration in their pilots and in their advisory boards.

Proposals should demonstrate how they will collaborate with or build upon the work of R&I projects from any of the following previous calls and projects: The climate imperative and its impact on democratic governance (HORIZON-CL2-2023-DEMOCRACY-01-05), H2020-SC6-GOVERNANCE-2020, the Green Deal Call – cross-cutting theme on empowering citizens, the projects PHOENIX and REAL DEAL under Horizon Europe Missions.

The possible participation of the JRC in the project could involve the following contributions from the side of the Competence Centre on Participatory and Deliberative Democracy:

- supporting networking activities by invitations to JRC events and the Community of Practice of the Competence Centre on Participatory and Deliberative Democracy;
- capacity building on citizen engagement;
- offering the use of the JRC Makerspace in Ispra, Italy.

Proposals should foresee cooperation with the EC Knowledge Centre for Biodiversity and the Science Service project BioAgora.

International cooperation is encouraged, in particular with Latin American and Caribbean countries.

The use of AI could be considered for the analyses needed under this topic.

Biodiversity friendly practices in agriculture

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-01-BIODIV-10: Supporting the implementation of nature restoration measures for sustainable farming systems

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 and 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 11.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁶⁷.</p>

Expected Outcome: In line with the targets of the European Green Deal, the common agricultural policy, and the EU biodiversity strategy for 2030, a successful proposal will contribute to the expected impact of this Destination by testing and implementing biodiversity-friendly practices while supporting long-term sustainability of farming and safeguarding food security. A successful proposal will contribute to facilitating the implementation of the EU Nature Restoration Regulation, aligning with the Union's overarching objectives of climate change mitigation and adaptation, for national authorities, by assessing and promoting the most suitable agricultural practices that support agrobiodiversity and a wide range of ecosystem services.

Projects are expected to contribute to all of the following expected outcomes:

- synergies between nature restoration/conservation and food security (production and availability) are scientifically demonstrated to farmers, land managers, advisors and policymakers;
- suitable measures and strategies, along with evidence-based recommendations, are identified and developed to assist farmers in the implementation phase, while supporting Member States competent authorities in addressing specific targets of the EU Nature Restoration Regulation in agricultural landscapes;

⁶⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- collaborations and exchanges between farmers, researchers, and policymakers from competent authorities are strengthened to enable the development of integrated and effective policies that restore natural capital, generate sustainable income for farmers, while also ensuring food availability and quality.

Scope: Farmers play a pivotal role in addressing biodiversity loss while ensuring food production and quality, thereby contributing to overall food security. To support biodiversity-friendly agriculture, it is essential to first list demonstrated farming practices and ecosystems that benefit biodiversity. Next, there is a need to assess the socio-economic impact of nature restoration measures on the agricultural sector and the individual farm, as well as develop and improve existing incentives and their interplay. A key element for a wide adoption of such practices by farmers is demonstrating production and labour benefits, or at least maintaining economic competitiveness in the implementation of nature restoration measures. Moreover, specific targets for agricultural ecosystems outlined in the EU Nature Restoration Regulation necessitate that applied research lays the foundation for Member States to effectively comply and design appropriate and successful strategies. Therefore, environmental, economic, and social benefits, as well as potential trade-offs between nature restoration measures and food security and quality (production and availability) should be demonstrated over different time frames. These should be developed with farmers in mind: short-term and immediate impact on production, their businesses, and nature, as well as medium-, and long-term.

Proposals should:

- quantify the costs and benefits of restoration measures on farm productivity (referring to the ratio input/output) over short, medium, and long-term. Additionally, evaluate the impact of taking action versus non-action on the provision of ecosystem services, such as climate, water, soil health, pollination, nutrients, natural pest control, erosion prevention, etc., along with their associated economic impact at farm level;
- develop and assess possible science-based targets for satisfactory levels of restoration for biodiversity in agricultural ecosystems considering Art. 11 of the EU Nature Restoration Regulation, a path for implementation by farmers, land managers and policymakers, and further develop, solidify, and harmonise existing indicators of biodiversity in agricultural landscapes;
- generate evidence to support and improve incentive schemes, including rewarding mechanisms for actions taken and results achieved in nature restoration/conservation on farmland, while considering synergies and trade-offs;
- assess and compare the potential of various farming approaches to contribute to ecosystem restoration. While considering all types and sizes of farming systems (conventional, organic, agroecological, etc.), prioritise those that are clearly defined to ensure compliance with legislation.

Proposals should adopt a transdisciplinary approach, engaging with relevant experts and stakeholders from farming, biodiversity and ecosystems, as well as from social sciences and

humanities (SSH). Proposals must apply the multi-actor approach to ensure adequate involvement of researchers, policymakers, farmers, land managers and agricultural advisors among other relevant stakeholders. Proposals should aim to increase practical, ready to use knowledge and tools, and promote freely accessible dissemination and open capacity building channels.

Proposals should allocate adequate resources to collaborate with topic projects funded under other topics in this work programme, in particular HORIZON-CL6-2025-01-BIODIV-06: Assessing and modelling socio-economic impacts of nature restoration. Moreover, proposals should build on existing knowledge and the results of other relevant projects, as well as ensure cooperation with appropriate Horizon Europe Partnerships, in particular ‘Biodiversa+’ and ‘Agroecology’.

The JRC may contribute by advising and providing relevant information on the effects of farming practices on the environment, biodiversity, and climate. This collaboration aims to enhance the targeting and quantification of proposed restoration interventions, alongside fostering cooperation with stakeholders and facilitating the dissemination of results to policymakers.

Proposals should foresee cooperation with the EC Knowledge Centre for Biodiversity and the Science Service project BioAgora.

Restoring ecosystems for resilient society and economy

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-01-BIODIV-01-two-stage: Living labs co-creating innovative solutions for forests and freshwater ecosystems restoration

Call: Cluster 6 Call 01 - two stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 14.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>

<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁶⁸.</p>
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Expected Outcome: Successful proposals will contribute to the impacts of this destination by improving knowledge and developing innovations, methods, pathways and tools to restore degraded ecosystems ensuring the provision of ecosystem services, including for adaptation and/or mitigation to climate change.

Project results are expected to contribute to all the following expected outcomes:

- The capacities of researchers, policymakers, practitioners and other stakeholders are enhanced, facilitating effective collaboration among research, practice, and policy to co-develop, test, refine and scale up solutions, methods and tools for ecosystem restoration and for their non-deterioration;
- Practice-oriented knowledge and tools are available to stakeholders having to restore ecosystems and to ensure their non-deterioration, and to provide advice, such as to public and private land managers, foresters or environmental NGOs;
- Competent authorities in charge of preparing and updating national restoration plans to implement the EU Nature Restoration Law and of national climate adaptation strategies and plans are aware of effective solutions, methods and tools for ecosystem restoration and they are able to propose appropriate restoration measures;
- Collaborations between actors across territories and sectors are strengthened and consideration of effective solutions for ecosystem restoration and for their non-deterioration in regions where living labs are operating is increased, and business models to finance them are developed;
- Social, economic and environmental co-benefits and trade-offs of nature restoration activities are demonstrated, including for climate mitigation and adaptation.

Scope: The EU biodiversity strategy for 2030 set the following targets for 2030: significant areas of degraded and carbon-rich ecosystems are restored; habitats and species show no deterioration in conservation trend and status, and at least 30% reach favourable conservation status or at least show a positive trend. The EU Nature Restoration Regulation establishes a

⁶⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

framework within which Member States shall put in place effective and area-based restoration measures with the aim to jointly cover, as a Union target, at least 20 % of land areas and at least 20 % of sea areas by 2030, and all ecosystems in need of restoration by 2050. The European Climate Law requires Member States to adopt and implement national adaptation strategies and plans in which they should promote nature-based solutions and ecosystem-based adaptation. It notably acknowledges that forests are carbon sinks, which contribute to the reduction of greenhouse gases in the atmosphere, while ensuring that forests continue to grow and provide many other services.

Successful proposals are expected to set up living labs which will develop and widely deploy innovative solutions for restoring key ecosystems, which deliver multiple ecosystem functions and services relevant for climate action, including carbon sequestration, regulating water regimes, and other climate adaptation aspects. Proposals under this proposal are expected to combine research on forest and freshwater ecosystems.

Proposals should apply the three main principles of the living labs research concept: (a) co-creating innovative solutions in real-life sites focusing on end-users' needs; (b) co-deciding / co-creating with end-users all along the project; (c) bringing together actors with complementary knowledge in a targeted combination as best suited to achieve the expected outcomes/objectives of the projects.

Living labs should correspond to the definition of the European Network of Living Labs and involve partners from different backgrounds, disciplines and/or sectors that are most relevant to achieve the project objectives and be composed of at least seven experimental sites. By working together in a living lab, the various partners involved in the different sites will be able to co-develop, experiment, test, replicate and benchmark innovative actions and solutions, compare results, exchange good practices, validate methodologies and benefit from cross-fertilisation within a local/regional setting.

More specifically, proposals should:

- set up at least three living labs to work together on ecosystem restoration, covering forests and freshwater ecosystems. The living labs are expected to be located in at least three different EU Member States and/or Associated Countries. Proposals should describe the rationale for cooperation across the various living labs and among the various stakeholders within the living labs;
- establish a detailed work plan of the activities to be undertaken in a transdisciplinary way, ensuring the co-design, co-development, and co-implementation of locally adapted innovative solutions
- conduct participatory and transdisciplinary research and innovation in living labs with the objective of finding practical solutions to ecosystem restoration, while considering relevant drivers of biodiversity loss, in particular climate change and invasive alien species, and related pressures. Challenges with scaling up and transferability of solutions should be addressed. Proposed strategies and solutions should be adapted to the different

environmental, socio-economic and cultural contexts in which the living labs are operating and should consider the cultural and natural heritage. Sites should be selected along a gradient of anthropogenic pressure to evaluate restoration challenges in heterogeneous areas from highly disturbed to relatively intact areas. Action oriented and collaborative approach combining local expertise in economics, ecology and locally created sustainable innovations to capture the full range of knowledge in addition to scientific knowledge should be sought. Gender dimension should be integrated;

- establish for each living lab a satisfactory level for ecosystem condition, in order to allow for an accurate assessment of the conditions and changes and a clear monitoring of progress towards the objectives. Where relevant, the overall objective should be to reach the good conservation status defined in the Habitats or in the Water Framework Directives. Impacts of forestry and forestry practises on freshwater ecosystem health and how changes in forestry practises/management can support the restoration of freshwater ecosystems, including sediments, should be considered;
- monitor and carry out an assessment of the innovative practices for ecosystem restoration and their effectiveness, including the conditions for non-deterioration. This should include a demonstration of the economic viability of the proposed innovative solutions for the end-users and appropriate business models and actions possibly involving local authorities, business communities, SMEs, investors, entrepreneurs should be developed, including with co-funding schemes;
- document the newly developed solutions in an intuitive and accessible way and widely disseminate them in order to facilitate their uptake by practitioners and transmit the acquired knowledge to all relevant actors.

Proposals should foresee cooperation with the EC Knowledge Centre for Biodiversity and the Science Service project BioAgora. Nature-based solutions are relevant to this topic if they concern the restoration of ecosystems.

This topic requires the effective contribution of SSH discipline in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Biodiversity friendly practices in agriculture

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-01-BIODIV-02-two-stage: Breeding for resilience: enhancing multi-stress tolerance in crops

Call: Cluster 6 Call 01 - two stage	
Specific conditions	
<i>Expected EU</i>	The Commission estimates that an EU contribution of around EUR

<i>contribution per project</i>	7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 14.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: In line with the objectives of the European Green Deal, the common agricultural policy, the EU climate policy and the EU biodiversity strategy for 2030, a successful proposal will contribute to the expected impact of this destination by supporting the adaptation of agricultural production to the effects of climate change, increasing biodiversity in agroecosystems, and promoting low-input practices, thereby enhancing the resilience of agricultural systems and safeguarding food security.

Projects are expected to contribute to all of the following expected outcomes:

- deeper knowledge and characterisation of relevant traits for tolerance and resistance to multiple stresses, whether occurring simultaneously or sequentially, are more accessible to researchers and breeders;
- the identification of local varieties with high plasticity to cope with multi-stress conditions is enhanced, along with the development of agro-ecological practices that improve stress tolerance while supporting biodiversity-friendly cropping systems;
- the capacities to evaluate the effects of multiple stresses in crops by researchers and breeders are strengthened;

- information and recommendations on variety performance and practices to cope with multi-stress are available to advisors and farmers.

Scope: Crop production faces significant challenges due to climate change and the need to adopt low-input practices, including efficient water use, to reduce the environmental impact while ensuring food security. Issues such as salinity, extreme weather conditions like droughts, waterlogging, high temperatures, and emerging patterns of pests and diseases severely impact crops, resulting in reduced productivity and yield losses. Crop responses to multiple stresses differ from their responses to single stresses. Therefore, attention should be given to enhancing crop tolerance to combinations of multiple abiotic and biotic stresses, thus better reflecting real-life agricultural conditions.

To address these challenges, it is crucial to evaluate local crop varieties, which are often better adapted to specific environmental conditions and stresses. Identifying local varieties with high plasticity enhances crop resilience and agro-biodiversity. Developing agro-ecological practices to improve stress tolerance will further support these efforts, promoting low-input practices and enhancing the overall adaptability of agricultural systems. Additionally, broad-spectrum strategies for improving stress tolerance in crops should be developed. Smart and future-proof breeding programmes need to systematically consider characteristics that enhance crop resilience and adaptation to these demands.

Proposals should:

- provide insight into the range of mechanisms and traits that underpin crop responses to multiple stresses, whether occurring simultaneously or sequentially, guiding the development of varieties and a crop system better equipped to withstand abiotic and biotic stresses, including reduced agricultural inputs;
- increase understanding of the causality between abiotic and biotic stress factors and propose strategies to improve multi-stress tolerance;
- integrate advanced technologies to assist in evaluating GxExM (Genotype x Environment x Management) interactions in the context of multi-stress, combining multiple "omics" data sources, high-throughput phenotyping, computational modelling and artificial intelligence, to evaluate at different levels (e.g. greenhouses, experimental fields, production fields). This integration should assist breeders in developing local varieties optimised for sustainability and climate change adaptation;
- develop location-specific breeding strategies and agroecological practices, incorporating models and artificial intelligence approaches for prediction of cropping systems output, under multiple stress conditions considering climate change scenarios and climate analogues. These strategies should promote agrobiodiversity, soil health, and ecosystem services;
- deliver robust methodologies for benchmarking and communicating the performance of crop varieties when they are challenged by multiple stresses.

Proposals should provide a clear explanation and justification for the selected crop(s) in alignment with the proposal's objectives and the topic's expected outcomes, considering as well that activities should be carried out in a range of agronomically relevant pedo-climatic conditions. All farming systems and approaches are in scope. If proposals address organic farming, particular attention should be given to aspects related to organic varieties and organic heterogeneous materials.

Proposals may provide financial support to third parties (FSTP) to, for instance, develop, test and demonstrate tools to evaluate GxExM interactions in the context of multi-stress. A maximum of 20% of the EU funding should be allocated to this purpose. Consortia need to define the selection process of organisations, for which financial support may be granted.

Proposals should ensure coherence and complementarities with ongoing relevant Horizon Europe projects, including the agroecology partnership, and capitalise on existing relevant research findings and tools, included those developed under previous research projects. Collaboration with European research infrastructures such as AnaEE-ERIC, EMPHASIS or other relevant research infrastructures⁶⁹ is encouraged.

⁶⁹ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>.

Destination - Fair, healthy and environment-friendly food systems from primary production to consumption

Food systems are to be understood as covering, ‘from the farm to the fork’, all the sectors, actors, stakeholders, organisations and disciplines relevant to and connecting natural resources, primary production from land, fresh water and sea, food processing, food distribution and retailing, food services, food consumption, healthy diets, food safety, nutrition and public health, and the prevention of food waste streams i.e. actors operating in the food supply circuit, working directly ‘with’ food. It also comprises actors that operate ‘around’ food at the broader food system level: governance, finance, education, media and culture, research, marketing and advertising, operational services and those representing business and professional interests. The Vision on agriculture and food and the Competitiveness compass will address challenges ensuring the long-term competitiveness and sustainability of the Agri-food sector within planetary boundaries. The EU Green Deal and more specifically its competitive, resilient and sustainable food system goals, the biodiversity strategy, the zero pollution and climate action ambitions, and their follow-up initiatives set ambitious targets and objectives for food systems will continue to guide research and innovation programming under this destination. Food system related policies cover an array of diverse areas. While those policy areas are interconnected, they cover specific sectors and actors along the food system that have distinct research and innovation needs to be addressed through this destination.

Sustainable farming systems provide economic, social (including health), environmental and climate benefits, and are the main prerequisite for food and nutrition security. For farmers, who are the backbone of food systems and principal managers of natural resources, the common agricultural policy (CAP) set ambitious targets and objectives concerning the sustainability and safety of feed, food and non-food production. R&I in line with the strategic approach to EU agricultural research and innovation⁷⁰ will be key enablers for achieving these ambitious targets and objectives. More specifically, they will contribute to the following policy priorities: nine specific objectives of the CAP; EU action plan for the development of organic production; food safety regulations; sustainable use of pesticides requirements under the plant protection products framework; animal health and welfare legislations; regulation on feed additives; legislative and non-legislative initiatives to enhance cooperation of primary producers and support their position in the food chain; protein strategy; contingency plan for ensuring food supply and food security and communications on food security and fertilisers.

The **partnerships on ‘Accelerating farming systems transition: agroecology living labs and research infrastructures’** will continue to unlock the potential of agroecology to make agri-food systems environmentally friendly and regenerative, climate-neutral, inclusive, competitive and resilient.

Through the **partnership on ‘Animal health and welfare’**, farmers and other actors will continue to be better equipped to protect animals against infectious diseases, including

⁷⁰ <https://ec.europa.eu/programmes/horizon2020/en/news/final-paper-strategic-approach-eu-agricultural-research-and-innovation>

zoonoses, and to improve animal welfare, while reducing the dependency on antimicrobials, maintaining productivity, improving food safety and quality, and protecting the environment and public health.

Sustainable fisheries and aquaculture, as mentioned in the 2023 common fisheries policy (CFP) communication, contribute to securing a wide variety of food and provide employment in many coastal communities. On top, the goal of the European Green Deal is ensuring a neutral or positive environmental impact of all sectors involved in the food system. The European Oceans Pact will focus on boosting the blue economy and ensuring the good governance and sustainability of our ocean in all of its dimensions. The CFP of the future is a policy that enables and supports: (i) fisheries and aquaculture activities within ecological boundaries, including organic aquaculture; (ii) fishing vessels and aquaculture farms that operate with less impact and fewer resources; (iii) the contribution of seafood to safeguarding food security and reinforcing the resilience and sustainability of food systems in the EU; as well as (iv) fishers and aquaculture farmers who can find fulfilment, recognition and economic well-being in their profession. Additionally, the Control Regulation clearly mentions that traceability is important not only for food safety purposes but also to allow control, ensure the protection of consumers' interests, combat illegal, unreported and unregulated fishing, and contribute to ensuring fair competition. R&I will also support the “strategic guidelines for a more sustainable and competitive EU aquaculture for the period 2021 to 2030”, that propose specific actions including access to space and water, human and animal health, environmental performance, climate change, animal welfare, regulatory and administrative framework, and communicating on EU aquaculture. Moreover, R&I in fisheries and aquaculture will contribute to the relevant Food 2030 pathway for action ‘food from oceans and freshwater resources’.

Sustainable, healthy and inclusive food systems rely on systemic, cross-sectoral and participatory, multi-actor approaches and on integration between policy areas at all levels of governance. An important driver for transforming food systems should be the integration of sectors, actors and policies⁷¹. This should occur in order to better understand the multiple interactions between the actors and components of current food systems, the lock-ins and potential leverage points for synergistic changes and the interdependencies of outcomes (linkages between nutritional climate and sustainability outcomes). This can provide solutions that maximise co-benefits with respect to the four priorities of the **Food 2030** R&I initiative: i) nutrition and health, including food safety; ii) climate and environmental sustainability; iii) circularity and resource efficiency; iv) innovation and empowering communities.

This destination will deploy solutions to the 11 Food 2030 pathways for action⁷² and will help build innovation ecosystems to bring together relevant public and private sector actors, researchers and society. R&I activities (including at organisational, social or technological levels) will provide food-related businesses, including those involved in food processing and

⁷¹ Scientific Advice Mechanism, [Towards a sustainable food system - Publications Office of the EU \(europa.eu\)](https://european-council.europa.eu/media/en/press-communications/infographic/Pages/infographic-towards-a-sustainable-food-system-2023-05-10.aspx)

⁷² [New Report: Food 2030 Research and Innovation – Pathways for action 2.0 - European Commission \(europa.eu\)](https://european-council.europa.eu/media/en/press-communications/infographic/Pages/infographic-towards-a-sustainable-food-system-2023-05-10.aspx)

packaging, retail, distribution, and food services, with opportunities and incentives to stimulate environmentally friendly, healthy, circular and diversified practices, products and processes that are biodiversity-friendly, climate-neutral and less reliant on fossil fuels. It will also help devise tools and approaches that enable the shift to healthy, sustainable diets and responsible consumption for everyone, boosted also by social innovation, technology, behavioural change and marketing standards, and by inclusively engaging with different consumers, citizens and communities. This will support the announced future EU vision for agriculture and food and the multi-disciplinary strategy for European life sciences that should further unlock high-value technologies in support of the green transition, and also contribute to the communication “Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU” and the forthcoming new EU biotech act.

The partnership on ‘Sustainable food systems for people, planet and climate’ will continue to accelerate the transition towards healthy and sustainable diets that are safe and sustainably produced in resilient EU and global food systems.

The EU also aims to promote a *global transition to sustainable food systems*. Its relationship with Africa is a key priority. Targeted R&I activities, in particular under the EU-Africa Partnership on Food and Nutrition Security and Sustainable Agriculture (FNSSA) and global initiatives involving international research consortia, will help achieve this ambition and contribute to the AU-EU High Level Policy Dialogue (HLPD) on Science, Technology and Innovation.

A comprehensive and integrated response to current and future challenges benefiting people, nature and economic growth in Europe and in Africa will be provided. Advances will be made particularly in the following key areas: agroecology, agriculture knowledge and innovation systems and nutrition.

Topic proposals under this destination should set out credible paths to “**ensuring healthy food and nutrition security by making agriculture, fisheries, aquaculture and food systems sustainable, resilient, inclusive and within planetary boundaries**”. More specifically, proposed topics should contribute to one or more of the following impacts:

- Agri-food systems contribute to the EU strategic autonomy by fostering food and nutrition security practices and safeguarding long-term sustainability with multi-disciplinary approaches including One Health.
- Farmers and relevant actors in agricultural primary sector are enabled to manage sustainable, efficient, profitable, circular, low greenhouse gas-emitting farming systems contributing to climate-neutrality and climate-resilience. This will be achieved by new knowledge, innovation and the upscaling and replication of existing and new sustainable farming approaches, including organic farming, while making farming a professionally attractive and remunerative life choice.

- Sustainable and resource efficient farming practices contribute to ecosystems' health, and their related ecosystem services, while minimising pollution, including in surface and groundwaters and the marine environment, and restoring and protecting biodiversity.
- Sustainable fisheries and aquaculture (including organic aquaculture) contribute to fair, healthy, resilient and environment-friendly food systems, promote low-impact and diverse aquatic food production. Healthy aquatic ecosystems with thriving diversity of species and habitats provide ecosystem and climate services for safe and sustainable fisheries and aquaculture and use of coastal zones for leisure activities, thus triggering growth and jobs' creation in coastal, and rural areas. Technological knowledge on the elimination of negative impacts of fishing and aquaculture is improved, in particular through the creation of innovative, more selective, energy and resource efficient and environmentally sustainable techniques.
- The just transition to overall sustainable, healthy and inclusive food systems⁷³ is consistently developed. Analysis of existing barriers and enablers to change allows to design effective leverages to steer the sustainability transition. Co-benefits for climate change mitigation and adaptation, environmental sustainability and circularity, sustainable healthy diets, malnutrition and hunger reduction are delivered.
- Food environments are transformed so that citizens and communities are empowered to move towards healthy, affordable and sustainable diets; food businesses can flourish; food processing industries' competitiveness is improved, while ensuring sustainability; food safety and food sovereignty as well as human health is preserved and food waste is reduced.

To unlock the full potential of R&I and maximise impacts of the expected outcomes, multi-actor and socially innovative approaches (involving the engagement of researchers, policy makers, technology providers, primary producers, the food, drink and hospitality industry, retailers and social economy actors, SMEs along the value chain, local authorities and communities, NGO and civil society, while considering gender and other socio demographic groups and their intersections etc.), open innovation ecosystems, such as living labs and regional innovation ecosystems such as Regional Innovation Valleys for Bioeconomy and Food Systems⁷⁴, will be promoted with a view to co-creating innovative systemic place-based solutions in support of food system sustainability. Activities will benefit from the implementation of unifying approaches through R&I, including the One Health approach where relevant.

To effectively transition innovations into the market, SMEs participation is particularly promoted under this destination. Topics under this destination should be balanced in terms of high as well as low Technological Readiness Levels (TRLs).

⁷³ [Sustainable food systems: Concept and framework \(fao.org\)](https://www.fao.org/3/af0402e/af0402e.pdf)

⁷⁴ [Concept of Regional Innovation Valleys for Bioeconomy and Food Systems](#)

R&I actions under this destination are encouraged to seek complementarities with the EU Missions ‘A Soil Deal for Europe’ and ‘Restore our Ocean and Waters by 2030’ as well as with the European partnerships on Agroecology, Animal Health and Welfare, Sustainable Blue Economy, Sustainable Food Systems for people, planet and climate, and Agriculture of Data (forthcoming), the Partnership for Research and Innovation in the Mediterranean areas (PRIMA) and importantly the European innovation Partnership for Agriculture productivity and sustainability (EIP-AGRI).

The EU will seek to increase the efforts on innovation actions for food systems sustainability in widening countries, reaching out to EU outermost regions and to countries in Central and Eastern Europe, also in preparation for the next EU enlargement.

To maximise the impacts of R&I under this destination, the topics encourage international cooperation as appropriate. The EU will promote a global transition to sustainable agri-food systems. Hence, targeted R&I activities in 2025, in particular under the EU-Africa Partnership on Food and Nutrition Security and Sustainable Agriculture (FNSSA) as well as other initiatives involving international research consortia and already running international activities, will contribute to this ambition.

Coordination will be ensured with the JRC activities under the EC Knowledge Centre for Bioeconomy, the EU Soil Observatory, the European Platform on Life Cycle Assessment, the EC Knowledge Centre for Earth Observation, the Knowledge Centre for Food Fraud and Quality, and the JRC secretariat for the Scientific, Technical and Economic Committee for Fisheries.

To be more effective in achieving impact, this Destination encourages synergies with relevant EU financial programmes and initiatives including the Knowledge and Innovation Communities (KICs) of the European Institute of Innovation and Technology (EIT), in particular EIT Food, and international cooperation programmes (e.g., DeSIRA).

The multi-actor approach is used in several topics. Relevant topics under this destination also require the integration of Social Sciences and Humanities (SSH) to apply a human-centred approach to R&I, and support social innovation at regional and local level to meet needs and co-create solutions for specific challenges.

Enabling sustainable farming systems

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-02-FARM2FORK-01: Additional activities for the European partnership on accelerating farming systems transition - agroecology living labs and research infrastructures

Call: Cluster 6 Call 02 - single stage
Specific conditions

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 90.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 90.00 million.
<i>Type of Action</i>	Programme Co-fund Action
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The proposal must be submitted by the coordinator of the consortium funded under HORIZON-CL6-2023-FARM2FORK-01-1: European partnership on accelerating farming systems transition – agroecology living labs and research infrastructures, European Horizon Europe - Work Programme 2023-2024 Food, Bioeconomy, Natural Resources, Agriculture and Environment. This eligibility condition is without prejudice to the possibility to include additional partners.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>If the proposal is successful, the next stage of the procedure will be grant agreement amendment preparations. If the outcome of amendment preparations is an award decision, the coordinator of the consortium funded under HORIZON-CL6-2023- FARM2FORK-01-1: European partnership on accelerating farming systems transition – agroecology living labs and research infrastructures, will be invited to submit an amendment to the grant agreement, on behalf of the beneficiaries.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>This action is intended to be implemented in the form of an amendment of the grant agreement concluded pursuant to topic HORIZON-CL6-2023-FARM2FORK-01-1.</p> <p>For the additional activities covered by this action:</p> <ul style="list-style-type: none"> • The funding rate is 50% of the eligible costs. This is justified by the pooling of proposers' in-kind contributions and in-house

	<p>activities and by the nature of activities to be performed.</p> <ul style="list-style-type: none"> • Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. • Financial support provided by the participants to third parties is one of the primary activities of this action in order to be able to achieve its objectives. The EUR 60 000 threshold provided for in Article 207(a) of the Financial Regulation No 2024/2509 does not apply. • The maximum amount of FSTP to be granted to an individual third party is EUR 10 000 000 for the whole duration of Horizon Europe⁷⁵. <p>The starting date of grants awarded under this topic may be as of the submission date of the application. Applicants must justify the need for a retroactive starting date in their application. Costs incurred from the starting date of the action may be considered eligible (and will be reflected in the entry into force date of the amendment to the grant agreement).</p>
<i>Total indicative budget</i>	<p>The total indicative budget for the topic is EUR 90 million committed in annual instalments over the years 2025-2027 (EUR 30 million from the 2025 budget, EUR 30 million from the 2026 budget and EUR 30 million from the 2027 budget). The total indicative budget of the Partnership for the whole duration is EUR 150 million.</p>

Expected Outcome: The successful proposal is expected to further contribute to the expected outcomes specified in topic HORIZON-CL6-2023-FARM2FORK-01-1: European partnership for accelerating farming systems transition - agroecology living labs and research infrastructures, for continuation of the activities in line with already agreed outcomes.

Scope: The objective of this action is to continue to provide support to the European partnership for accelerating farming systems transition - agroecology living labs and research infrastructures identified in the Horizon Europe Strategic Plan 2021-2024 and first implemented under the topic HORIZON-CL6-2023-FARM2FORK-01-1: European partnership for accelerating farming systems transition - agroecology living labs and research infrastructures, and in particular to fund additional activities (which may also be undertaken by additional partners) in view of its intended scope and duration, and in accordance with Article 24(2) of the Horizon Europe Regulation.

⁷⁵ However, if the objectives of the action would otherwise be impossible or overly difficult (and duly justified in the proposal) the maximum amount may be higher.

The consortium which applied to and received funding under HORIZON-CL6-2023-FARM2FORK-01-1: European partnership for accelerating farming systems transition - agroecology living labs and research infrastructures, is uniquely placed to submit a proposal to continue the partnership. Not only did this consortium submit the proposal leading to the identification of the partnership in the Horizon Europe strategic planning 2021-2024, it has also been implementing the partnership through two co-funded calls launched in year 2024 and several internal activities based on this planning and further to topic HORIZON-CL6-2023-FARM2FORK-01-1. In this context, the current consortium has particular expertise in relation to the objectives of the partnership, the activities to be implemented in particular financial support to third parties and internal activities clearly required/envisioned pursuant to initial proposal/partnership. In practice, another consortium could not continue the activities of the partnership underway without significant disruption to the ongoing activities, if at all.

The proposal submitted to this call should align with the partnership's co-created strategic research and innovation agenda. Activities should reflect a balanced proportion of financial support to third parties and of internal activities, including calls for research projects, setting-up an EU-wide network of agroecology living labs and research infrastructures, development of indicators, metrics, and tools to monitor the agroecology transition and sustainability performance, and supporting evidence-based policy-making at EU, national and regional level. Through its activities, the partnership should deliver and support the upscaling of concrete, ready-to-use tools, solutions and innovations for farmers in different pedo-climatic conditions and contexts, and ensure a wide-spread uptake of partnership's results by farmers and by all relevant stakeholders. These aspects should be reflected in the successive updates of the partnership's strategic research and innovation agenda.

The partnership should pool the necessary financial resources from the participating national (or regional) research programmes with a view to organising and implementing joint calls for transnational proposals resulting in grants to third parties, for which it should factor ample time to run the co-funded projects.

The partnership should seek to include additional partners, including from Member States and Associated countries not yet in the consortium funded under HORIZON-CL6-2023-FARM2FORK-01-1. Through its activities, and by remaining open to accepting new partners, the partnership should devote efforts to promote agroecological farming also in countries where there is still limited understanding and uptake of the concept. Likewise, in setting up and building an EU-wide network of agroecology living labs, the partnership should ensure a balanced representation of pedo-climatic conditions and bio-geographical regions, with a view to cover a wide range of farming systems that are representative of the European agricultural sector. The partnership should cover issues pertaining to the agroecology transition in all agricultural production systems and approaches, including but not limited to conventional and organic farming. This will among others contribute to supporting the development of the organic farming sector and increasing its sustainability, as well as to ensuring a widespread adoption of agroecological practices across sectors across Europe.

Specific activities to strengthen the complementarities of the European partnership for accelerating farming systems transition - agroecology living labs and research infrastructures, with the related Horizon Europe Missions and Partnerships, identified in the proposal submitted by the coordinator of the consortium funded under HORIZON-CL6-2023-FARM2FORK-01-1, as well as activities to enhance the partnership's collaborations at international level, should also be described.

While the award of a grant to continue the partnership in accordance with this call should be based on a proposal submitted by the coordinator of the consortium funded under HORIZON-CL6-2023-FARM2FORK-01-1 and the additional activities (which may include additional partners) to be funded by the grant should be subject to an evaluation, this evaluation should take into account the existing context and the scope of the initial evaluation as relevant, and related obligations enshrined in the grant agreement.

Taking into account that the present action is a continuation of topic HORIZON-CL6-2023-FARM2FORK-01-1 and foresees an amendment to an existing grant agreement, the proposal should also present in a separate document the additional activities and any additional partners, to be covered by the award in terms of how they would be reflected in the grant agreement.

HORIZON-CL6-2025-02-FARM2FORK-02: Additional activities for the European partnership on animal health and welfare

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 120.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 120.00 million.
<i>Type of Action</i>	Programme Co-fund Action
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The proposal must be submitted by the coordinator of the consortium funded under HORIZON-CL6-2023-FARM2FORK-01-2: European partnership on animal health and welfare, European Horizon Europe - Work Programme 2023-2024 Food, Bioeconomy, Natural Resources,</p>

	Agriculture and Environment. This eligibility condition is without prejudice to the possibility to include additional partners.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>If the proposal is successful, the next stage of the procedure will be grant agreement amendment preparations. If the outcome of amendment preparations is an award decision, the coordinator of the consortium funded under HORIZON-CL6-2023- FARM2FORK-01-2: European partnership on animal health and welfare will be invited to submit an amendment to the grant agreement, on behalf of the beneficiaries.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>This action is intended to be implemented in the form of an amendment of the grant agreement concluded pursuant to topic HORIZON-CL6-2023-FARM2FORK-01-2.</p> <p>For the additional activities covered by this action:</p> <ul style="list-style-type: none"> • The funding rate is 50% of the eligible costs. This is justified by the pooling of proposers' in-kind contributions and in-house activities and by the nature of activities to be performed. • Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. • Financial support provided by the participants to third parties is one of the primary activities of this action in order to be able to achieve its objectives. The EUR 60 000 threshold provided for in Article 207(a) of the Financial Regulation No 2024/2509 does not apply. • The maximum amount of FSTP to be granted to an individual third party is EUR 10 000 000 for the whole duration of Horizon Europe⁷⁶. <p>The starting date of grants awarded under this topic may be as of the submission date of the application. Applicants must justify the need for a retroactive starting date in their application. Costs incurred from the starting date of the action may be considered eligible (and will be reflected in the entry into force date of the amendment to the grant agreement).</p>

⁷⁶ However, if the objectives of the action would otherwise be impossible or overly difficult (and duly justified in the proposal) the maximum amount may be higher.

<i>Total indicative budget</i>	The total indicative budget for the topic is EUR 120 million committed in annual instalments over the years 2025-2027 (EUR 40 million from the 2025 budget, EUR 40 million from the 2026 budget and EUR 40 million from the 2027 budget). The total indicative budget of the Partnership for the whole duration is EUR 180 million.
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Expected Outcome: The successful proposal is expected to further contribute to the expected outcomes specified in topic HORIZON-CL6-2023-FARM2FORK-01-2: European partnership on animal health and welfare, for continuation of the activities in line with already agreed outcomes.

Scope: The objective of this action is to continue to provide support to the European partnership on animal health and welfare identified in the Horizon Europe Strategic Plan 2021-2024 and first implemented under the topic HORIZON-CL6-2023-FARM2FORK-01-2: European partnership on animal health and welfare, and in particular to fund additional activities (which may also be undertaken by additional partners) in view of its intended scope and duration, and in accordance with Article 24(2) of the Horizon Europe Regulation.

The consortium which applied to and received funding under HORIZON-CL6-2023-FARM2FORK-01-2: European partnership on animal health and welfare is uniquely placed to submit a proposal to continue the envisioned partnership. Not only did this consortium submit the proposal leading to the identification of the partnership in the Horizon Europe strategic planning 2021-2024, it has also been implementing the partnership through a co-funded call launched in year 2024 and a number of internal activities, including research projects, based on this planning and further to topic HORIZON-CL6-2023-FARM2FORK-01-2. In this context, the current consortium has unique expertise in relation to the objectives of the partnership, the activities to be implemented in particular through financial support to third parties and internal activities clearly required/envisioned pursuant to the initial proposal/partnership. In practice, another consortium could not continue the activities of the partnership underway without significant disruption to the ongoing activities, if at all.

The proposal submitted to this call should align with the partnership's co-created strategic research and innovation agenda. Activities should reflect a balanced proportion of financial support to third parties and of internal activities, including research projects, integrative activities, networking, training or other activities. Through its activities, the partnership should deliver and give rise to ready-to-use tools, solutions and innovations, seek uptake of results by farmers, veterinarians and all relevant stakeholders, and provide science-based policy advisory activities. The proposal should focus on additional priority activities and when duly justified, on continuation of on-going activities.

The partnership should seek to include additional partners, in particular from Member States and Associated countries not yet in the consortium funded under HORIZON-CL6-2023-FARM2FORK-01-2.

The partnership should pool the necessary financial resources from the participating national (or regional) research programmes with a view to organising and implementing joint calls for transnational proposals resulting in grants to third parties, for which it should factor ample time to run the co-funded projects.

Specific additional activities to strengthen the complementarities of the European partnership on animal health and welfare with the related Horizon Europe partnerships, identified in the proposal submitted by the coordinator of the consortium funded under HORIZON-CL6-2023-FARM2FORK-01-2, as well as activities to enhance the partnership's collaborations at international level, should also be described.

While the award of a grant to continue the partnership in accordance with this call should be based on a proposal submitted by the coordinator of the consortium funded under HORIZON-CL6-2023-FARM2FORK-01-2 and the additional activities (which may include additional partners) to be funded by the grant should be subject to an evaluation, this evaluation should take into account the existing context and the scope of the initial evaluation as relevant, and related obligations enshrined in the grant agreement.

Taking into account that the present action is a continuation of topic HORIZON-CL6-2023-FARM2FORK-01-2 and foresees an amendment to an existing grant agreement, the proposal should also present in a separate document the additional activities and any additional partners to be covered by the award in terms of how they would be reflected in the grant agreement.

HORIZON-CL6-2025-02-FARM2FORK-03: Overcoming the barriers for scaling up circular water management in agriculture

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>

	If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.

Expected Outcome: In line with the European Green Deal objectives for agriculture, the climate adaptation strategy and the EU water related policies, notably the Water Framework Directive and the Water Reuse Regulation, successful proposals will contribute to increasing the resilience of agriculture to water scarcity with improved circular water management systems and enable farmers and relevant actors to manage farming systems in a long-term sustainable and resource-efficient way, enhancing their ability to adapt to climate change, while lowering the pressure on water bodies, as described for this destination.

Project results are expected to contribute to all of the following expected outcomes:

- sustainable pathways to scale up the use of alternative water sources by farmers in agriculture in different contexts in the EU and Associated Countries (where relevant) are developed;
- enhanced knowledge is available to farmers on the long-term impact of alternative water sources for irrigation and other uses with special attention to emerging contaminants;
- resilience of farming systems to water scarcity is increased, especially in areas where droughts are becoming more frequent, longer and more intense, due to climate change;
- awareness and confidence of farmers and consumers in alternative water use in agriculture is increased.

Scope: According to the European Environmental Agency (EEA), water stress affects 30% of the EU population with an economic damage of up to EUR 9 billion annually. Droughts are increasing in frequency, magnitude and impact, and the affected area is expanding. Agriculture is the main water user in some Member States and Associated Countries.

Alternative water sources and storage systems (e.g., rainwater harvesting, storm water collection, water reuse and reclamation, brackish and sea water desalination, aquifer recharge, etc.) limit abstractions from surface waters and groundwater reducing the environmental footprint of agriculture and food systems, and provide a reliable water source for irrigation and other uses, strengthening its resilience. Some barriers still hinder a broader use of alternative water sources. For example, a lack of knowledge from farmers on the benefits and characteristics of other water supplies, financial models considering production and transport costs, seasonal variations of water quality with nutrient imbalances and salinity, heavy metals or emerging contaminants issues, or long-term impacts.

Proposals should:

- test different strategies and technologies for irrigation or for other agricultural purposes (including drinking water for livestock), using alternative water sources (considering the most feasible sources according to the specific conditions of availability, climate, soil, socio-economics, environment) in the long-term in real-life contexts across the EU and Associated Countries (where relevant) at a larger scale beyond small experimental sites, covering the whole water cycle in agriculture;
- identify and test different business models regarding financial viability and long-term economic sustainability (including cost-benefit analysis or agro-economic modelling) for the adoption of alternative water sources, considering different scenarios, pedo-climatic conditions and socio-economic contexts;
- evaluate the long-term impact of the use of alternative water sources on soil health, including the soil microbiome, crop productivity and quality, food and feed safety (especially for fresh-consumed products) and on freshwater resources and ecosystems (surface and groundwater), considering seasonal variations of water source quality (including persistent chemicals and microplastics' releases) and quantity, such as situations of extreme water scarcity;
- test and document cost-efficient methodologies and techniques to monitor most relevant quality and quantity parameters in real-time and/or to remove contaminants (e.g. using bio-filters) for a safe and efficient management of water from different sources, with particular attention to emerging contaminants especially in reclaimed water;
- identify societal, behavioural and regulatory challenges still hampering upscaling of alternative water sources' uptake for irrigation and development of suitable solutions to increase the uptake in practice;
- develop, test and make recommendations for improved and targeted incentives and policies at regional, national and European level to reduce financial, social and economic barriers for adoption and acceptance of circular water management in agriculture by farmers and consumers;
- enhance the dissemination of existing knowledge, by connecting actors, policies, projects and instruments to speed up adoption of solutions by practitioners, and by providing training and advice for farmers and demonstration activities. Complementarities with European and national AKIS knowledge channels or similar should be explored.

Proposals should benefit various farming systems/approaches, one of which should be organic farming.

Applicants should apply the most efficient, state of the art agricultural practices and technologies (including irrigation, soil and crop management, etc.) to ensure maximum impact.

This topic should involve the effective contribution of social sciences and humanities (SSH) disciplines, especially in the field of societal and behavioural sciences, and of adoption and acceptance processes.

Proposals must implement the multi-actor approach (MAA), involving at least scientists, companies working in the field of water management and agriculture, farmers and consumers, in order to co-create the knowledge and adapted solutions, and enhance the adoption process.

Proposals should include dissemination activities to increase awareness about the potential value for farmers, advisors and society at large and people of the results. In that sense, proposals should develop diverse practice-oriented dissemination materials, e.g., audiovisual materials, brochures, etc. presenting the R&I solutions, while exploring the use of relevant support services offered by the Commission, such as the Horizon Results Booster.

Proposals should ensure complementarities with other relevant activities carried out under Horizon Europe, including with the European Partnership on Agriculture of Data.

Regarding activities involving aquifer recharging, proposals should take into consideration guidelines provided by the Working Group Groundwater (one of the several groups under the umbrella of the Common Implementation Strategy for the Water Framework Directive), such as provided in the Guidance Document on Managed Aquifer Recharge under the Water Framework Directive.

Applicants are encouraged to tap into international expertise (particularly from Africa and the Mediterranean Area) where relevant. Complementarities with the PRIMA and Water4All partnerships should be explored.

The JRC could participate in this topic, applying its tools to support analysis, such as its integrated agro-economic modelling platform (iMAP) for scenario assessments, or specific water-related models.

HORIZON-CL6-2025-02-FARM2FORK-04: Enhancing plant protein production to bolster the resilience of agricultural systems and EU self-sufficiency in plant protein used as feed

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 11.00 million.
<i>Type of Action</i>	Research and Innovation Actions

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁷⁷.</p>

Expected Outcome: In line with the European Commission’s food security communication⁷⁸, the successful proposals will support the reduction of the EU's import dependency on key agricultural products and inputs by boosting EU plant proteins production and use for feed while increasing the sustainability and resilience of Europe’s agricultural systems.

Successful proposals should support the objectives of the common agricultural policy (CAP), as well as the EU Green Deal strategies, the EU climate action⁷⁹, and the communication on boosting biotechnology and biomanufacturing in the EU.

Successful proposals will deliver on the expected impacts of the destination by enabling agri-food systems to contribute to EU strategic autonomy by fostering food and nutrition security and safeguarding long-term sustainability of EU farming systems.

Projects results are expected to contribute to all of the following expected outcomes:

- farmers capacity to sustainably produce and use protein crops for feed in the EU is fostered;
- farmers and advisors understanding about protein crops cultivation and share in animals’ diets is improved;
- knowledge and innovation of the diverse actors across the protein crops value chain on preservation and transformation processes of protein crops for feed is increased;

⁷⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁷⁸ COM(2022) 133 final (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52022DC0133>)

⁷⁹ COM(2022) 133 final ([EUR-Lex - 52022DC0133 - EN - EUR-Lex](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52022DC0133))

- contributions to move towards a more competitive EU protein crop sector are provided, rendering agricultural systems more resilient to climate change, external shocks and supply chain disruptions, while more committed to biodiversity preservation and conservation.

Scope: Currently, protein crops⁸⁰ cultivation, such as grain legumes and fodder legumes, only accounts for a small proportion (around 3%) of the EU agricultural area. While there is little shortage in the protein supply for food purposes in the EU, there is a more important shortage in the feed sector⁸¹, resulting in high levels of imports (especially of soya) originating from countries often with different environmental and social standards. It is, therefore, strategic for the EU to expand the domestic production of protein crops, including in mixed crops⁸² as a feed source.

Increasing the EU' plant protein autonomy would allow for reducing imports of protein feed from third countries, and thereby, would contribute to the decrease of environmental and climate footprints. Additionally, promoting locally produced protein crops would contribute to the sustainable development of EU rural areas, in line with the EU long-term vision on rural areas, for example through the development of new regional value chains that are self-sustaining. Developments in this area should at the same time be coherent with the new Regulation on deforestation-free products⁸³ by reducing the impact of plant protein feed needs on deforestation and forest degradation globally.

The benefits of increasing the share of protein crops, in particular nitrogen-fixing leguminous crops, in EU farming systems, are also reflected in the climate and the environment, through the improvement of soil quality (restoring and enhancing biodiversity, increasing soil fertility, cycling nutrients, improving soil structure, increasing water retention capacity, etc.) which in turn improves the sustainability and resilience of farms.

Proposals should:

- improve the knowledge about local production and utilization of various available protein crops used for animal feed across different regions;
- identify gaps, needs, barriers and enablers for taking up and scaling up sustainable protein crops intended for feed use in the EU, from production to processing and trade levels. Draw up a strategic roadmap with research and innovation priorities based on the identified challenges, including for the optimization of manufacturing processes of locally produced plant protein into feed;
- identify, test and showcase biodiversity-friendly management practices in farming systems (crop production and livestock raising) containing protein crops intended for

⁸⁰ In this topic, protein crops refer to crops with a high content of proteins which can be used for animal feed.

⁸¹ [EC \(2023\), EU agricultural outlook for markets, 2023-2035](#)

⁸² Cereals and grain legumes or grass and fodder legumes are examples of mixed crops used for feed (maize and beans, clover and ryegrass, barley and peas, etc).

⁸³ Regulation - 2023/1115 - <http://data.europa.eu/eli/reg/2023/1115/oj>

feed use. Prioritise the use of climate and pest resilient protein crops adapted to different EU pedoclimatic conditions;

- assess the social, economic and environmental impacts and trade-offs for up- and downstream actors of the feed value chain, of the increased share of different protein crops in different farming systems;
- generate comprehensive capacity building material, trainings and information tools for farmers, advisors and extension services, including a visualization tailored to different geographical regions and pedoclimatic zones in the EU. Address the most cost-effective production systems with protein crops and combinations of crops, based on local agronomic features as well as on local market data such as demand for feed.

All farming approaches, including organic farming, are in the scope of this topic.

Proposals must implement the 'multi-actor approach' and ensure adequate involvement of the main actors relevant for domestic plant protein feed value chain, such as farmers, other land managers, advisors, feed manufacturers, industry (including small and medium enterprises), policy-makers, etc. Proposals should ensure an effective knowledge, co-creation and exchange between researchers and field actors as well as with the whole feed value chain actors concerning the benefits, challenges and opportunities of producing and integrating local protein crops for feed in the EU. To this end, proposals should develop diverse practice-oriented dissemination materials presenting R&I solutions (e.g. audiovisuals, brochures, fact sheets, etc) and should share all generated data and knowledge through existing digital tools or platforms.

Proposals should include a dedicated task, appropriate resources, and a plan on how they will collaborate with the other project funded under this topic and with relevant activities to be carried out under topic HORIZON-CL6-2024-FARM2FORK-02-5-two-stage⁸⁴ and HORIZON-CL6-2025-02-FARM2FORK-06⁸⁵. Proposals should ensure coherence and complementarity with ongoing relevant Horizon Europe projects and with relevant activities of the Horizon Europe Partnership 'Agroecology'. Likewise, proposals should capitalise on existing relevant research findings and tools, such as those resulting from Horizon 2020 projects.

The possible participation of the JRC in the project could consist of support analysis, applying its tools such as the integrated agro-economic modelling platform (iMAP), for scenario assessment.

⁸⁴ HORIZON-CL6-2024-FARM2FORK-02-5-two-stage: 'Animal nutritional requirements and nutritional value of feed under different production management conditions', under [wp-9-food-bioeconomy-natural-resources-agriculture-and-environment_horizon-2023-2024_en.pdf \(europa.eu\)](#).

⁸⁵ HORIZON-CL6-2025-02-FARM2FORK-07: 'Improving grassland management in European livestock farming systems', under this work programme.

HORIZON-CL6-2025-02-FARM2FORK-05: Developing innovative phytosanitary measures for plant health - focus on systems approach for pest risk management

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁸⁶.</p> <p>Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: Successful proposals should contribute to the objectives of the common agricultural policy, as well as to the European Green Deal's objectives for resilient and sustainable agri-food systems, the EU biodiversity strategy for 2030 and support Regulation (EU) 2016/2031⁸⁷ on protective measures against pests of plants.

⁸⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁸⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016R2031>

Successful proposals will deliver on the expected impacts of the destination by enabling farmers and relevant actors in the agricultural sector to manage sustainable, efficient, profitable, circular, low greenhouse gas-emitting farming systems contributing to climate-neutrality and climate-resilience.

Project results are expected to contribute to all of the following expected outcomes:

- cost-effective measures using a systems approach, implemented across the entire agri-value chain, are developed and tested, with a thorough assessment of their combined effects and interactions to ensure efficiency and sustainability;
- the capacity of farmers and actors in the agri-value chain to manage pest risks more effectively, in an environmentally friendly and fair manner, across various agricultural and trade contexts is strengthened through collaborative efforts, with particular attention to the challenges posed by climate change;
- scientific support, recommendations and policy advice are provided to enhance plant health policies, fostering international cooperation and strengthening global efforts to combat plant pests.

Scope: Plant health is critical for agriculture, forestry, ecosystems, and biodiversity on a global scale. However, maintaining healthy crops is becoming increasingly challenging due to climate change, biodiversity loss, globalisation, and international trade, which accelerate the spread of pests and diseases. These threats can severely harm crops, native plants, and the environment, jeopardising agricultural sustainability, biodiversity, and food security.

Effective plant health measures play a vital role in protecting sustainable agriculture and enhancing global food security, safeguarding the environment, forests, and biodiversity, and facilitating economic and trade development. A systems approach to plant health is a comprehensive pest risk management strategy that integrates different measures, at least two of which act independently, with cumulative effect and of high efficacy⁸⁸. The systems approach is designed to effectively meet phytosanitary import requirements, allowing for the consideration of measures and procedures that contribute to effective pest risk management throughout the entire value chain, from pre-planting and pre-harvest stages to harvest, post-harvest handling, transport, and distribution. By integrating multiple measures, this approach enhances the ability to manage pest risks comprehensively and sustainably, ensuring the health of plants and the safety of agricultural products across borders. Proposals should target one or more plant pests⁸⁹, providing a clear explanation and justification for the selected pest(s) in alignment with the proposal's objectives and the topic's expected outcomes.

Proposals should:

⁸⁸ International Standard for Phytosanitary Measures No. 14. The use of integrated measures in a systems approach for pest risk management [<https://www.ippc.int/en/publications/607>]

⁸⁹ A pest is defined here as any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products (EU legislation, Regulation 2016/2031)

- develop innovative climate and environmental-friendly measures for a highly efficacious pest risk management to be implemented across the value chain to meet the phytosanitary requirements in a variety of socio-economic contexts;
- evaluate risk reduction, cost-effectiveness, scalability, and sustainability, of each proposed innovative measures;
- design and validate protocols targeting systems approaches, considering the whole value chain;
- assess the combined effect of all measures and their interactions across the value chain, including cost-effectiveness, scalability, and overall sustainability (economic, social and environmental aspects);
- support capacity building and training of the actors within the value chain, enabling the large-scale adoption of safe, innovative, cost-effective measures.

International cooperation is strongly encouraged. Results should benefit diverse farming systems/approaches, such as conventional and organic farming.

Proposals must implement the ‘multi-actor approach’ including a range of actors to ensure that knowledge and needs from various sectors such as research, plant health services, farming/forestry sectors, advisory services, and other relevant actors of the value chain are brought together. This topic should involve the effective contribution of social sciences and humanities (SSH) disciplines.

Proposals may provide financial support to third parties (FSTP) to, for instance, develop, test and demonstrate innovative measures. A maximum of 10% of the EU funding should be allocated to this purpose. Consortia need to define the selection process of organisations, for which financial support may be granted.

The possible participation of the JRC in the project could involve supporting the analysis to understand the acceptance and adoption of innovative measures across the value chain.

Proposals should ensure coherence and complementarities with ongoing relevant Horizon Europe projects and capitalise on existing relevant research findings and tools, included those developed under previous research projects.

The proposals should include a dedicated task in the workplan and appropriate resources to collaborate with the projects funded under this topic.

HORIZON-CL6-2025-02-FARM2FORK-06: Improving grassland management in European livestock farming systems

Call: Cluster 6 Call 02 - single stage
Specific conditions

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>

Expected Outcome: Proposals should contribute to the objectives of the common agricultural policy (CAP), to the EU Green Deal's goals for resilient and sustainable agri-food systems, the EU biodiversity strategy, the Nature Restoration Regulation, the climate policy, and the EU action plan for the development of organic production. Proposals will also contribute to the expected impacts of the destination by enabling farmers and relevant actors in the agricultural sector to manage sustainable, efficient, profitable, circular, low greenhouse gas-emitting farming systems contributing to climate-neutrality and climate-resilience.

Project results are expected to contribute to all the following expected outcomes:

- the availability of data, models and methodologies to measure, monitor, assess and valorise the multifunctionality of grassland farming systems is improved, benefitting all relevant actors involved in grassland management;
- the availability and accessibility for, and use by farmers of sustainable grassland management knowledge, innovative solutions/practices and strategies is increased;
- networking, participatory approaches and knowledge mobilisation among relevant stakeholders for sustainable grassland management is enhanced;
- scientific support and recommendations for the development, implementation and evaluation of EU policies relevant for grasslands, including the CAP, the EU climate policy and the Nature Restoration Regulation is provided.

Scope: Well managed grasslands are key for the sustainability of the EU's and Associated Countries agriculture and for the delivery of multiple ecosystem services, including water purification, erosion and flood prevention, carbon sequestration and food production, and for preserving biodiversity. Grasslands can also play an important role as protein crop supply for feed. They constitute key elements of European socio-cultural landscapes. However, grasslands maintenance and functions in the EU are under threat for reasons that may include sub-optimal input management, intensification, farm concentration, climate change and abandonment.

Ensuring the sustainable management of grasslands and preventing their disappearance is essential for a sustainable farming sector, for healthy nature, and for human wellbeing in the EU and Associated Countries. This calls for increasing scientific evidence on grasslands across Europe, including on their performance, benefits and trade-offs (e.g., climate, environment, biodiversity, socio-economic). There is also a need to further develop and demonstrate approaches that allow assessing the climate change adaptation and mitigation potential of grazing livestock systems, along with other benefits they can deliver. Moreover, farmers need new knowledge, innovative solutions, support and advice to sustainably maintain grasslands, and to restore degraded grassland habitats.

In this context, the role of and coherence among policies is crucial. Research and Innovation have a key role to play in demonstrating that properly managed grasslands systems are viable options for farmers.

This topic focuses on grazing livestock systems and involves both permanent grasslands, as defined in Regulation (EU) 2021/2115⁹⁰, and temporary grasslands, understood as arable land with grasses, or grass mixtures with other species, that has been included in the crop rotation before reaching the five years that are necessary to be considered as permanent grassland.

Proposals should address all the following activities and should cover various farming systems/approaches, one of which should be organic farming:

- develop and operationalise methodologies to measure, monitor, benchmark and assess the performance of grassland farming systems in different contexts in terms of the delivery of ecosystem services (e.g., productivity, carbon sequestration, nutrient cycling, resilience to climate change, soil health, forage value), biodiversity restoration, reducing emissions of greenhouse gas (GHG) and air pollutants, and social aspects such as profitability for farmers and co-benefits for other stakeholders. This should include analysis of synergies and trade-offs between the above elements in the short- to medium- and long-terms. The benchmark of the performance of grassland farming systems should also include comparison between different levels of grass-based ruminants' farming systems in similar pedo-climatic contexts;
- develop new knowledge, innovative solutions/practices, and manageable strategies for creating, maintaining and restoring grasslands systems that are productive, cost-

⁹⁰ <http://data.europa.eu/eli/reg/2021/2115/oj>

effective, sustainable, environmentally sound, and resilient to a changing climate. These strategies should include assessment of innovations in the social, environmental and economic domains, such as market uptake by value chain actors and consumers through, for instance, standards and labelling;

- develop farm- and landscape level decision tools and strategies to support farmers in managing grasslands sustainably, to improve forage productivity and quality and livestock production, and the delivery of other ecosystem services, based on documented cases or in-situ demonstrators;
- organise activities to mobilise the sharing of knowledge (scientific, practical and traditional), and networking among relevant actors. Proposals should develop practice-oriented dissemination materials, e.g. audiovisual materials, brochures, etc., presenting solutions, and make them publicly available;
- assess relevant public policies at various levels and provide policy recommendations to improve their impact and coherence in supporting sustainable grassland systems;
- perform economic cost-benefit analysis of applying the R&I solutions developed during the project and explore the potential of financing or incentive tools specific to the sustainable management of grassland farming systems, including lower-polluting and lower-GHG-emitting grazing livestock systems, and where relevant, restoration of degraded grasslands habitats.

Proposals must implement the 'multi-actor approach' and ensure adequate involvement of the main stakeholders involved in grassland management in Europe, e.g., farmers (including farmers managing protected grassland habitats), shepherds and related organisations notably in the ruminants' sectors, advisors, policy-makers, landscape and territorial planners, industry including small and medium enterprises, social economy actors, consumers, environmental Non-Governmental Organisations, etc.

Proposals should capitalise on research findings and tools, included those developed under previous research projects. Proposals should cover a variety of grasslands systems in different pedo-climatic conditions and biogeographical regions across the EU and consider marginal areas at risk of abandonment or with other constraints, and areas in intensification trends towards arable crop farming. Activities should allow for the comparison of performance and sustainability between grasslands systems presenting mixtures of plant species, including legumes, compared to mono-species grasslands. The possible contribution of the JRC could involve connecting with spatial datasets on livestock grazing density and grassland management intensity available in its portfolio. Furthermore, Eurostat⁹¹ related data should also be considered.

Proposals should include a dedicated task, appropriate resources and a plan on how they will collaborate with other projects funded under this topic. Proposals should, where relevant, consider the use of Earth Observation data. Proposals should ensure complementarities with

⁹¹ <https://ec.europa.eu/eurostat/web/experimental-statistics/geospatial-data-agricultural-census>

other relevant activities carried out under other initiatives in Horizon Europe, including those funded under the topics HORIZON-CL6-2025-02-CLIMATE-04, HORIZON-CL6-2025-02-FARM2FORK-04, as well as with relevant activities of the Horizon Europe Partnership ‘Agroecology’ and other relevant future Horizon Europe Partnerships and R&I projects.

In order to enhance the societal and long-term impact of the activities beyond the life cycle of the project, proposals should apply social innovation and citizen engagement and include a strong involvement of citizens/civil society, together with academia/research, industry/SMEs/start-ups and government/public authorities.

This topic should involve the effective contribution of social sciences and humanities (SSH) disciplines. To achieve the objectives of this topic, international cooperation is encouraged.

HORIZON-CL6-2025-02-FARM2FORK-07: Fostering animal breeding and genetics for climate change adaptation and mitigation, improved robustness and resilience

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Technology Readiness Level</i>	Specified activities are expected to achieve TRL 7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the</p>

	Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁹² .
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Expected Outcome: Successful proposals will contribute to more sustainable and environmentally responsible land-based agricultural production systems, which are among the objectives of the EU Green Deal, including the methane strategy, the action plan for the development of organic production and the common agricultural policy (CAP) among others. The proposals will help tackle the issues linked to emissions from livestock and will support the EU Members States and Associated Countries in implementing cost-effective mitigation efforts and better quantifying their expected impacts. Successful proposals will also contribute to the expected impacts of the destination by enabling farmers and relevant actors in the agricultural sector to manage sustainable, efficient, profitable, low greenhouse gas emitting farming systems contributing to climate-neutrality and climate-resilience.

Project results are expected to contribute to all the following expected outcomes:

- the understanding by all relevant actors involved in livestock breeding practices and programmes of interactions between management, genotype and environment is enhanced, with the aim of improving the sustainable management of livestock population and achieving efficient animal/feed recoupling from farm to landscape scale;
- genomic and phenotypic characteristics that could be applied in breeding schemes for the selection and use of animals having desirable traits for lower greenhouse gas emissions and other climate-change and environmental related challenges for the livestock sector are widely known and considered by breeders;
- contribution of breeding and genetics in livestock to sustainability and production efficiency, including trade-offs among other breeding objectives are known by all relevant actors involved in livestock breeding practices and programmes, where improvement paths are undertaken and options to overcome obstacles to their adoption are provided;
- scientific support and recommendations/policy advice for the development, implementation and evaluation of EU policies and strategies, including the CAP and other policies relevant for sustainable livestock production, is provided.

Scope: Breeding and genetic improvements are among the tools with potential to help livestock to increase production efficiency and sustainability, to adapt to the changing environment (e.g., harsh climates, health hazard, changes in feed quality or availability) as well as to help to mitigate emissions. By selecting specific traits that are important for adaptation and mitigation purposes, and integrating them in breeding programmes, livestock farmers and breeders can contribute to more sustainable livestock farming systems. Balancing

⁹² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

multiple breeding objectives, including reduction of methane emissions and other environmental considerations, is complex and requires careful consideration of trade-offs, including with animal health and welfare. Proposals should enhance animal breeding programmes by identifying, validating and upscaling easily accessible and low-cost protocols, which can be used at farm level in diverse environments and production systems, for measuring and selecting existing and new traits with low environmental and climate footprint.

The aim is to optimise the selection of animals with genotypes that are best suited to thrive in different production systems and environmental conditions, with different diets and rumen/gut microbiota by incorporating adaptation and mitigation objectives into breeding and sustainable management decisions.

Proposals should address all the following activities and should cover various terrestrial livestock farming systems/approaches, one of which should be organic farming:

- identify new traits, including proxy indicators from -omic or meta-omic data, that consider genotype-environment interactions on the whole animal lifespans to renew breeding goal, i.e. desirable traits for lower greenhouse gas emissions and other climate-change related challenges, validate and integrate them into indexes used to benchmark farm performance;
- develop tools/systems/methods to measure genotype-environment interaction and traits of interest, predicting the breeding value at animal and population levels in diverse farming conditions, while maintaining genetic diversity;
- demonstrate in an operational environment breeding programs and management practices for improving robustness, lifetime efficiency and resilience, including the contribution of livestock to climate change mitigation efforts and the adaptation to climate change conditions (TRL 7) while considering trade-offs including with animal health and welfare and demonstrating gender-responsive strategies where relevant;
- analyse the cost effectiveness of the identified breeding programmes and assess private and/or public incentives or rewarding schemes for the use of certain mitigation-related traits currently used in some European regions or countries, with their advantages, limits, and ways to overcome them.

Proposals must implement the 'multi-actor approach' and ensure adequate involvement of the main stakeholders involved in livestock breeding in Europe, including farmers, breeders, advisors, private sector/industry, and policy-makers.

The proposal should include a dedicated task, appropriate resources, and a plan on how it will collaborate with other projects funded under this topic, and ensure coherence and complementarities with ongoing relevant Horizon 2020 and Horizon Europe research projects, including relevant infrastructures. Proposals should interact with relevant structures or organizations at European level and beyond such as FAO, Livestock Environmental

Assessment and Performance Partnership (LEAP, FAO)⁹³, Global Research Alliance on Agricultural Greenhouse Gases⁹⁴.

To better address the requirements of the topic, international cooperation is encouraged.

HORIZON-CL6-2025-02-FARM2FORK-08: Exploring the potential of controlled environment agriculture (CEA)

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025)⁹⁵.</p> <p>Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: By exploring the potential of controlled environment agriculture (CEA) as a transformative contribution to global food security and sustainability challenges, the successful proposal will support the common agricultural policy (CAP), the European Green Deal's goals for resilient and sustainable agri-food systems and the EU Climate Law. It will also deliver on the expected impact of the destination by enabling farmers and relevant actors in the agricultural primary sector to manage sustainable, efficient, profitable, circular and low emissions farming systems contributing to climate-neutrality and climate-resilience. This will be achieved by new knowledge, innovation and the upscaling and replication of existing and

⁹³ <https://www.fao.org/partnerships/leap/en/>

⁹⁴ <https://globalresearchalliance.org/research/livestock/networks/>

⁹⁵ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

new sustainable farming approaches while making farming a professionally attractive and remunerative life choice.

Project results are expected to contribute to all the following expected outcomes:

- a holistic understanding of CEA is provided, comprising technological needs, trade-offs, sustainability, societal and environmental impacts and policy implications;
- the knowledge of CEA sustainability is advanced, in its economic, environmental and societal dimensions (profitability, energy efficiency, greenhouse gas emissions (GHG), environmental sustainability and circularity, social dimension, etc.);
- novel and diverse crop varieties with potential in CEA are identified, and next generation of CEA systems are explored;
- adoption, expansion and uptake of CEA best practices are enhanced.

Scope: Controlled Environment Agriculture (CEA) refers to any form of agriculture that controls and optimises environmental conditions such as temperature, humidity, carbon dioxide, light or nutrient concentration. Examples of CEA include greenhouses, vertical farms, grow rooms, building-integrated agriculture, hydroponics, aquaponics, aeroponics and other practices where technological advancements enable precise regulation of growing conditions farming. Optimising CEA offers advantages in terms of resource efficiency, environmental sustainability and crop quality, providing a promising alternative to traditional agriculture for meeting the growing global demand for food, especially in the face of climate change and urbanisation. More research on CEA is essential to address its challenges, from addressing technological gaps to expanding crop diversity and reducing environmental impacts, so to unlock its full potential as a sustainable solution for future food production.

Proposals should:

- assess the state-of-the-art technologies and innovations in CEA, evaluating their effectiveness, assessing resource efficiency (including energy and water demands) and identifying opportunities for optimisation through technological innovations and management practices;
- analyse the socio- economic feasibility and viability of implementing CEA systems at different scales and evaluating their cost-effectiveness compared to conventional agriculture. Analysing the economic viability of sustainable CEA practices.
- investigate the environmental sustainability and environmental footprint⁹⁶ of CEA systems (including GHG emissions);

⁹⁶ Commission Recommendation (EU) 2021/2279 on the use of the Environmental Footprint methods to measure and communicate the life cycle environmental performance of products and organisations

- assess the current state of crop varieties grown in CEA systems, identifying gaps and opportunities for the development of novel crop varieties, including innovation in plant variety testing, and challenges hindering the adoption of novel crop varieties in CEA;
- provide insights into the future trajectory of CEA, examining emerging trends, investigating technological innovations (like IoT, artificial intelligence, robotics, biotechnologies, etc.), and their implications for sustainable food production in the coming decades and the farming profession therein. Identify key challenges hindering CEA adoption and provide strategies for enhancing the expansion of best practices in CEA.

The involvement of SMEs is essential for this topic. Proposals may involve financial support to third parties, particularly for SMEs providing and/or developing testing, or validating the proposed innovative technologies/solutions. A maximum 30% of EU funding should be allocated to this purpose.

Proposals should capitalise on relevant research findings and tools, included those developed under previous research projects.

HORIZON-CL6-2025-02-FARM2FORK-09: Strengthening the EU crop breeding research and innovation ecosystem for competitive, resilient, and sustainable agriculture

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁹⁷ .

⁹⁷ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link:

Expected Outcome: Successful proposals should contribute to the objectives of the common agricultural policy, the European Green Deal's goals for resilient and sustainable agri-food systems and ensure the long-term competitiveness and sustainability of the farming sector within planetary boundaries. Proposals should also support the Commission communication on: Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU⁹⁸ and should contribute to the expected impacts of the destination by enabling farmers and relevant actors in the agri-food sector to manage sustainable, efficient, profitable, circular, low greenhouse gas-emitting farming systems contributing to climate-neutrality and climate-resilience.

Projects are expected to contribute to all the following expected outcomes:

- enhanced critical understanding and applicability of funding landscapes and financing models at national, regional and EU levels for plant breeding, is achieved, leading to more efficient coordination and streamlining of research and innovation actions among public and private actors;
- a co-creative environment is established, enabling stakeholders to collaboratively identify and prioritise shared research gaps and infrastructure needs for crop breeding, ensuring coordinated research efforts at national, regional, and EU levels;
- trans-national R&I cooperation between the public and private breeding sector and the research community is supported, focusing on shared research priorities, critical and emerging technologies, and aligning efforts to address key challenges in crop breeding;
- market access processes of new, improved varieties are facilitated, addressing identified gaps and development needs.

Scope: Crop production faces growing challenges, including the urgent need to adapt to climate change, enhance water and nutrient efficiency, protect biodiversity, improve soil health, reduce environmental impacts, and ensure food security and resilience. Tackling these complex issues demands innovative solutions and the conservation and sustainable use of plant genetic resources to develop resilient and adaptable crops. Prioritising diversification, resilience, and ecological approaches—including organic farming—will strengthen sustainable farming systems and boost the overall resilience of agriculture.

Support for smart, future-oriented plant breeding programs that prioritise traits enhancing crop resilience, sustainability, and adaptability, is a key objective for the coming years, aimed at strengthening food security. To achieve these goals, it is essential to ensure that companies, particularly small and medium-sized enterprises (SMEs) in the breeding sector, have access to cutting-edge scientific expertise, modern breeding technologies, and a highly skilled workforce. This will drive innovation and ensure that the latest advances benefit both farmers and the entire breeding community. Additionally, market access process for new varieties,

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁹⁸ COM (2024)137 final.

including variety testing and registration, are critical in realising these benefits, and the research and development needs in relation to prioritised traits and values for cultivation should be identified.

Better coordination of research activities is crucial to overcome the current fragmentation of public and private research efforts. Strengthening collaboration across international, regional, and national levels will help integrate the needs of farmers, breeders, researchers, industry stakeholders, and society at large. A more connected and cohesive approach has the potential to enhance the efficiency of the research and breeding ecosystem, streamline innovation processes, align them with the needs of all stakeholders, and support the competitiveness of the agri-food value chain.

Proposals should:

- conduct a comprehensive mapping of the relevant plant breeding needs of farmers, breeders, industry and society, and related activities within the EU;
- evaluate the infrastructure available, including state-of-the-art infrastructure and demonstration facilities, and identify gaps that need to be addressed and the opportunities presented to support cutting-edge research and breeding activities, suitable to cover the needs of different agricultural sectors, including market access;
- provide evidence and insights on how current funding sources and financial models at EU, regional, and national levels are mobilised to support research and innovation in the plant breeding public and private sectors;
- assess adoption and implementation of participatory approaches for breeding activities and provide insights on integrating these methods, highlighting pathways for involving farmers, end-users, and other stakeholders to ensure that breeding outcomes meet diverse agricultural, environmental and societal needs;
- establish a structured framework for an EU-wide network that promotes close cooperation among research and innovation actors, including funders, research institutions, and infrastructure providers, alongside the public and private plant breeding sectors. This framework could be developed by coordinating and integrating existing networks and initiatives, creating a unified platform to facilitate collaboration, knowledge exchange, and joint initiatives;
- develop a strategic R&I roadmap that outlines priorities for plant breeding research and innovation at the EU level. Prepare the groundwork for potential action aimed at fostering cooperation, aligning efforts, and advancing the public and private plant breeding sectors.

Particular attention should be paid to minor, underutilised and permanent crops. All farming systems and approaches, including organic farming, are within scope. Specific considerations should be made for organic varieties and organic heterogeneous materials to ensure their unique needs are adequately addressed.

Proposals should consider the perspectives and needs of the different 27 EU Member States to ensure a high level of representation, while also considering relevant global initiatives, such as the Kunming-Montreal Global Biodiversity Framework (GBF)⁹⁹.

Proposals should ensure coherence and complementarity with ongoing relevant Horizon Europe projects, including the Agroecology partnership, and capitalise on existing relevant research findings and tools, such as those resulting from the Horizon 2020 and Horizon Europe projects. Collaboration with European research infrastructures such as AnaEE-ERIC, EMPHASIS or other relevant research infrastructures¹⁰⁰ is encouraged.

Enabling sustainable fisheries and aquaculture

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-02-FARM2FORK-10: Diversifying aquaculture production with emphasis on low-trophic species

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: In the frame of the EU's farm to fork strategy, the EU strategic guidelines for sustainable aquaculture for the period 2021 to 2030, the EU algae initiative and the food 2030 R&I policy framework, successful proposals will contribute to the impact of this Destination on sustainable fisheries and aquaculture.

Project results are expected to contribute to all of the following expected outcomes:

- consumers have access to a variety of edible aquatic species produced in the EU and in Horizon Europe Associated Countries¹⁰¹;

⁹⁹ Notably its target 13 on fair and equitable sharing of benefits that arise from the utilization of genetic resources.

¹⁰⁰ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>.

¹⁰¹ https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/list-3rd-country-participation_horizon-euratom_en.pdf

- aquaculture industry has access to new and improved technologies to enhance the competitiveness and profitability of the sector;
- reduced environmental impact of the sector, becoming resilient and climate-adaptive and contributing to climate change mitigation;
- increased information available to consumers to enhance their literacy in relation to the nutritional and environmental benefits of food produced in aquatic ecosystems;
- economic growth and creation of jobs in coastal and rural areas.

Scope: Aquaculture is booming globally but in the EU is almost stagnating. The “Strategic Guidelines for a more sustainable and competitive EU aquaculture for the period 2021 to 2030” (COM(2021)236 final) identify diversification as a key area for further work in conjunction with supporting the farming of existing species. The guidelines underline that the EU aquaculture sector has great scope for further diversification, not only in the farming of promising new species (notably diversification into non-fed and low-trophic species with a lower environmental footprint), but also in production methods such as integrated multi-trophic aquaculture (IMTA) and organic aquaculture. The guidelines therefore promote the development of IMTA, organic aquaculture and the diversification to lower-trophic species alongside supporting the existing production of finfish and shellfish species.

Algae and shellfish have a huge market potential but are not always well-known to the consumers. EU imports more than 60% of the seafood consumed, with algae imports alone worth 0,5 billion EUR.

The scope of this topic includes all possible edible aquatic organisms with preference for low-trophic species which, in the frame of this topic, are photosynthetic or herbivorous or un-fed species. There is also preference for fish farming that relies on feed ingredients low in fish meal and oil and/or produced in the region where the farm is situated or in neighbouring to the farm regions, as well as feed ingredients derived from circular practices, such as, the use of wastes or by-products.

Aspects of sustainability, including circularity and zero waste, in particular in relation to the achievement of good environmental status, should also be addressed following a life cycle approach and potentially applying Environmental Footprint methods as described in Recommendation (EU) 2021/2279. Issues of fair pricing as well as regional particularities should also be addressed. Research could include aspects of feeding, breeding but also health and welfare issues as well as economic issues and issues of consumers’ acceptance. Regulatory aspects and legal barriers regarding the approval of novel feed ingredients or the licencing of new aquaculture farms should also be considered. Collaboration with European research infrastructures such as EMBRC ERIC and with accredited laboratories is encouraged.

Proposals should take into account, when applicable, the work done under the DIVERSIFY¹⁰² FP7 project, the Horizon 2020 AquaVitae and ASTRAL projects as well as the IMPRESS, NOVAFOODIES, INNOAQUA, ULTFARMS, OLAMUR, AlgaePro BANOS, LOCALITY, VeriFish, Mr.Goodfish3.0 and EUAqua.Org Horizon Europe projects and relevant national and regional projects.

This topic should involve the effective contribution of Social Sciences and Humanities (SSH) disciplines. International cooperation is encouraged for win-win outcomes and mutual benefits.

HORIZON-CL6-2025-02-FARM2FORK-11: Towards modern, integrated, and effective fisheries monitoring, control and surveillance (MCS) systems

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: In line with the common fisheries policy and in particular the Data Collection Framework (DCF)¹⁰³, the revised Control Regulation¹⁰⁴, the farm to fork strategy goals, the food 2030 R&I policy framework, the EU biodiversity strategy and in particular its target 15, the EU Marine Strategy Framework Directive and the EU action plan on protecting and restoring marine ecosystems for sustainable and resilient fisheries, successful proposals will contribute to the impact of this Destination on sustainable fisheries and aquaculture.

Project results are expected to contribute to all of the following expected outcomes:

¹⁰² <https://cordis.europa.eu/project/id/603121>

¹⁰³ Regulation EU 2017/1004, <http://data.europa.eu/eli/reg/2017/1004/oj>.

¹⁰⁴ Regulation EU 2023/2842, <https://eur-lex.europa.eu/eli/reg/2023/2842/oj>.

- improve data collection (including position and catch data) for small scale fisheries (SSF)¹⁰⁵, recreational fisheries¹⁰⁶ and long-distance fisheries, i.e. EU fleets operating beyond EU waters¹⁰⁷, while reducing the costs of data collection and analysis;
- improve efficiency, save costs, and advance fisheries monitoring, surveillance, control and enforcement technologies to fight illegal, unreported and unregulated (IUU) practices in SSF, recreational fisheries and long-distance fisheries;
- provide effective and, where possible, real-time tools for monitoring fishing operations, including for the implementation of technical measures, for mitigation requirements for target and bycatch species, as well as for sensitive species and for comparing and matching logbook and/or landing declaration data with data collected and reported by observers on board;
- increase and enhance data collection resolution while exploring the potential of interconnecting vessel tracking and e-logbooks to improve interoperability and expand their usage in SSF and long-distance fisheries;
- contribute to the standardisation on how data are collected and the harmonisation of implementing procedures and quality control for collecting and processing data with a view to using these data in fisheries management and improving the reliability of scientific advice;
- improve the mechanisms for sharing fisheries dependent data among fisheries management authorities and institutions formally charged with provision of scientific advice;
- improve the digital readiness of SSF, recreational fisheries and long distance fisheries by identifying solutions such as business models that encourage and enhance fishers' adoption of digital technology as well as data sharing, through distribution of incentives and risks among stakeholders (i.e. fishers, policy makers, scientists).

The funded projects should contribute to the achievements of the United Nations 2030 Agenda and its Sustainable Development Goals and global biodiversity framework COP-15 goals and targets for marine ecosystems and fishing areas.

Scope: The implementation of the revised Fisheries Control Regulation (EU Regulation 2023/2842) and relevant implementing and delegating acts require tools to identify patterns, anomalies, trends and detect inconsistencies in electronic reporting (validation and cross-checking of data) at high spatial and temporal resolution, supporting more effective fisheries

¹⁰⁵ Vessels of less than 12 metres in length overall, according to the Regulation (EU) 2023/2842 of the European Parliament and of the Council.

¹⁰⁶ Non-commercial fishing activities exploiting marine biological resources for recreation, tourism or sport, according to the Regulation (EU) 2023/2842 of the European Parliament and of the Council.

¹⁰⁷ E.g., in international waters, including in particular those under the purview of Regional Fisheries Management Organisations and in waters subject to the sovereignty or jurisdiction of third countries, including in particular in the context of Sustainable Fisheries Partnership Agreements.

monitoring, control and surveillance. Moreover, it requires secure, tamper-resistant, accurate and innovative vessel tracking systems tailored for the specificities of different types of fisheries such as, small-scale fisheries. These systems need to ensure reliable monitoring, be cost-effective and easily deployed and maintained. In addition, monitoring and controlling the catch reporting by millions of recreational fishers in European waters and estimating the ecological impact of recreational fisheries requires new and effective strategies and tools.

The new European fisheries control system also calls for innovative remote sensing technology and satellite imaging systems equipped with automatic detection abilities. These tools are needed to monitor and control fishing operations, complement and cross check data from fisheries observers, and verify compliance with regulations. Such tools will also help to identify and combat IUU fishing activities (e.g., detecting illegal transshipments, illegal discards, unauthorised gear use, and unlicensed fishing) in EU waters and beyond and improve the European maritime situational awareness.

Funded projects should firstly focus on extending data collection to encompass SSF, recreational fisheries and long-distance fisheries, enhancing MCS capabilities. Secondly, funded projects should develop, and test user-friendly technologies tailored for these sectors, while striving to reduce associated costs. Thirdly, funded projects should devise innovative MCS methods to improve efficiency alongside advancements in remote monitoring and surveillance technologies to support the effective implementation of relevant fisheries regulations and combat IUU fishing practices in these sectors. Fourthly, funded projects should emphasise the development of technology for automatic real-time data collection, including the vessel monitoring systems (VMS) and other vessel tracking technologies, and explore opportunities for interconnecting vessel tracking position, electronic monitoring systems and e-logbooks to enhance data resolution and expand their usage in SSF and long-distance fisheries. Finally, funded projects should focus on applications of artificial intelligence technologies for mining information and data deriving from various monitoring technologies in a timely and cost-efficient manner, for the purpose of supporting effective data collection and cross verification, as well as, monitoring of compliance with applicable fisheries rules and regulations.

Funded projects should also include solutions to directly gather data from fishing activities, including data required under the DCF and for the meaningful application of the Ecosystem Approach to Fisheries management, such as data on biological, environmental, economic, social aspects of the fisheries and basic information on the fishers, vessels, and gear.

Successful proposals are expected to contribute to increase the number of datasets in fisheries dependent data, also including non-commercial species and discards, while ensuring data collection standardisation as well as harmonisation of process and methods on how data are handled to support small scale fisheries data collection.

Successful proposals are expected to take an integrated approach, encompassing the development of new fisheries monitoring and data collection and analysis for SSF, recreational fisheries and long-distance fisheries. Funded projects should showcase the expected outcomes through four case studies covering the following:

- EU SSF in European Seas (Mediterranean Sea or Baltic Sea or Black Sea or North East Atlantic);
- EU SSF in EU Outermost Regions¹⁰⁸;
- recreational fisheries in EU waters;
- EU long-distance fisheries in the Indian Ocean or the Pacific Ocean.

Additional case studies can be included.

Proposals should include, in all stages (from conceptual development until the implementation of the outcomes) the involvement of fishers, other relevant actors, including citizens, and end users.

Proposals are encouraged to cooperate with actors such as the European Commission's Joint Research Centre (JRC). The possible participation of the JRC in the project would consist in providing and/or analysing fisheries data.

Proposals should consider the 2024 recommendations provided by the Strategic Working group on Fisheries and Aquaculture Research (SCAR-Fish¹⁰⁹). Proposals are expected to allocate specific tasks and resources to link with relevant Horizon Europe projects, such as Fish-X, EveryFish, and OptiFish, and projects on the Digital Twin Ocean such as SURIMI and SEADITO as well as projects focusing on observing and mapping biodiversity coastal and marine ecosystems, such as OBAMA-NEXT, MARCO-BOLO and DiverSea and other biodiversity projects such as B-USEFUL.

Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable). When possible, data should become available through the European Marine Observation and Data network, ensuring their further availability for the development of fisheries management related applications through the EU Digital Twin Ocean core infrastructure (EDITO). Proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant data spaces.

Transforming food systems for health, sustainability and inclusion

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-02-FARM2FORK-12: Nutrition and Mental Health

Call: Cluster 6 Call 02 - single stage
Specific conditions

¹⁰⁸ https://ec.europa.eu/regional_policy/policy/themes/outermost-regions_en

¹⁰⁹ <https://scar-europe.org/fish-documents>

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: the proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹¹⁰.</p>

Expected Outcome: The successful proposals will contribute to one of the challenges highlighted in the updated Food 2030 report, particularly under the Food 2030 pathway 7 “Nutrition and Sustainable Healthy Diets”¹¹¹, on how inadequate intakes, malnutrition and unhealthy diet affects people’s mental health and well-being.

They will contribute to the Commission communication on a comprehensive approach to mental health published in 2023¹¹² and to the Healthier together - the EU non-communicable diseases (NCD) initiative presented in June 2022¹¹³.

Project results are expected to contribute to all the following expected outcomes:

- healthy diet is improved and the effects of unhealthy diets on mental health in children (above 36 months), adults (above 18 years old) and older population (above 65 years

¹¹⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹¹¹ https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/new-report-food-2030-research-and-innovation-pathways-action-20-2023-12-04_en

¹¹² COM (2023) 298 final.

¹¹³ https://health.ec.europa.eu/non-communicable-diseases/healthier-together-eu-non-communicable-diseases-initiative_en

old) under different social and economic context for a European comprehensive overview are better monitored;

- science-based communication to policymakers and various professionals is improved and the understanding of the interlink between a healthy diet, nutrition and mental health wellbeing, in the children, adult and older population, is facilitated;
- mechanisms are identified to help to understand the effects of nutrition (i.e. food groups, beverages, macro- and micronutrients) on mental health disorders and also to prevent or exacerbate the development of any mental health disease also by taking into account, as far as possible, differential gender-specific dietary patterns;
- new and improved evidence support decision makers, public authorities, health and nutritional public and private institutes, and stakeholders in the assessment of those effects;
- sound data are identified for developing standardised/validated metrics and analysis approaches (including the use of Omics approaches) on the function/role of the gut microbiome and its interplay with host metabolism;
- knowledge is enhanced to improve nutrition in individuals with mental health disorders to ensure better health and longevity conditions;
- indicators are used to measure the beneficial or detrimental effect of food groups, beverages and, macro and micronutrients present in a daily diet and/or dietary behaviour on preventing mental health disorders.

Scope: Mental health has become a major issue of public health, and economic and social concern across Europe. A healthy dietary pattern can affect mental health and well-being through anti-inflammatory, antioxidant, neurogenesis, microbiome- and immune-modifying mechanisms, as well as through epigenetic modifications¹¹⁴. A good nutritional status is important for maintaining normal body function and adequate growth and development and preventing or mitigating the dysfunction induced by internal or external factors. Environmental psychology has demonstrated the positive impact of healthy nutrition on self-perception, self-efficacy, and successful relationships, as well as on several psychological constructs.

Moreover, alteration of the microbiome could also have an impact on neurodevelopment and neurodegenerative disorders as microbiome has been linked to several mental illness such as depression, bipolar disorders, schizophrenia¹¹⁵.

The proposals should address all the following activities:

¹¹⁴ Maurizio Muscaritoli, The Impact of nutrients on mental health and well-being: insights from the literature. *Frontiers in Nutrition*, mini review 8 March 2021.

¹¹⁵ Hayley A Young, *Nutrition research reviews* (2023) 36, 471-483.

- establish the specific food groups, beverages, macro and micronutrients needed in a daily diet (from food sources or to be integrated to the daily diet) to prevent the development of mental health disorders in Europe and explore the need to characterise and supplement a healthy diet with specific macro and micronutrients in children, adults, and older population affected by specific diseases related to mental health disorders through interviews and literature review;
- establish, through a mapping of the most recent research and innovation projects, the 3-axis 'diet-gut microbiome-host-health' interplay to elucidate some molecular mechanisms and the causal relationship between changes in the gut microbiome and some mental health disorders (including the establishment of possible relevant biomarkers as necessary);
- provide recommendations and develop specific communication materials for prevention campaigns, in line with international and national health and dietary advice and related policies, for national authorities and for nutritional professionals, to communicate the link between healthy diets and mental health, as well as the need to supplement a healthy diet with macro- and micronutrients and/or adapt dietary patterns to prevent mental health disorders to patients;
- provide recommendations on how established deficiencies or excess intake of macro and micronutrients could be addressed, in line with international and national health and dietary advice and related policies, including means to increase or decrease nutrients in the diet, in particular in vulnerable groups.

The information is collected for different ranges of the population in Member States and Associated Countries. Experts, which make the link between the role of food groups, beverages, macro- and micronutrients to mental health, should work closely in identifying the main food groups, beverages, macro- and micronutrients needed or to be limited in a daily diet and which are linked to specific mental health disorders and the possible development of mental disease.

The involvement of citizens and civil society, including Citizen Science approach is encouraged as an appropriate research methodology/approach for this topic. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

The proposals should include a dedicated task in the workplan and appropriate resources to collaborate with the projects funded under this topic.

The proposals must implement the 'multi-actor approach' and ensure adequate involvement of all relevant stakeholders and value chain actors including industry, nutritionists, healthcare professionals, scientists, patients, consumers associations. The active participation and engagement of different stakeholders should span the entire project development and implementation to ensure performance and sustainability and maximise the final impact.

The proposals should involve the effective contribution of SSH disciplines.

Where relevant, the proposals could consider complementarities and avoid duplication with other related funded projects. In particular ERA4Health partnership and the Nutribrain call topic¹¹⁶ and JPND's ERA-NET Cofund (JPcofund2) and the project 'EURO-FINGERS multimodal precision prevention toolbox for dementia in Alzheimer's disease', which included nutritional guidance¹¹⁷ (Call - Better Health and care, economic growth and sustainable health systems (H2020-SC1-BHC-2018-2020)¹¹⁸.

HORIZON-CL6-2025-02-FARM2FORK-13: Raising citizen awareness on alternative proteins derived from biotechnology

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: the proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹¹⁹.</p>

¹¹⁶ <https://era4health.eu/nutribrain-2024/>

¹¹⁷ <https://www.neurodegenerationresearch.eu/wp-content/uploads/2020/06/PROJECT-EU-Fingers.pdf>

¹¹⁸ https://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-health_en.pdf

¹¹⁹ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Expected Outcome: In line with Food 2030 R&I initiative¹²⁰ and the Commission communication on Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU¹²¹, the successful proposal will empower citizens to make informed decisions regarding alternative proteins sources derived from biotechnology¹²² and increase the awareness of the impact of such dietary shift (sustainability and health-related impacts). The successful proposal will also strengthen education, communication awareness and access to information on alternative proteins and contribute to an informed understanding and acceptance of the public of the use of biotechnologies in the food sector.

Project results are expected to contribute to all the following expected outcomes:

- scientific knowledge is improved at national, regional and local levels on the use of different biotechnology applications for food and food ingredients;
- communication and understanding of the social and economic aspects as well as of the environmental impact of the use of alternative protein sources derived from biotechnology are improved;
- citizens' awareness on the characteristics of alternative proteins, derived from biotechnology (such as precision fermentation) is enhanced through different communication tools at national, regional and local level;

policy inconsistencies (e.g. public funds directed towards unsustainable production of unhealthy foods despite Green Deal objectives) or regulatory issues limiting market uptake with a negative impact to the public are identified.

Scope: The proposal is expected to help public understanding and awareness of the use of alternative proteins produced through biotechnology and to contribute to counteracting misinformation in this area. It should support, as appropriate, educational interventions and information dissemination on the transition towards diets based on alternative protein sources, in particular those derived from biotechnology. The proposal should also address which (new) food products offer market opportunities and where the potential of their production is and which accompanying measures (hygienic conditions, dissemination campaign, etc.) are necessary so that consumers are aware and open to include alternative proteins produced through biotechnology in their diets.

The proposal should address all the following activities:

¹²⁰ [New Report: Food 2030 Research and Innovation – Pathways for action 2.0 - European Commission \(europa.eu\)](https://european-council.europa.eu/media/en/press-communications/infographic/Pages/infographic-2024-01-23-01.aspx). See Pathway 4 “Alternative Proteins for Dietary Shift”.

¹²¹ COM (2024) 137 final.

¹²² According to the OECD, biotechnology is defined as the application of science and technology to living organisms, as well as parts, products and models of them, to alter living or non-living materials for the production of knowledge, goods and services. Advanced biotechnologies are geared towards various application areas, being the main ones medical and pharmaceutical (“red” biotechnology), agri-food (“green” biotechnology), and industrial and environmental (“white” biotechnology), with the marine biotechnology (so-called “blue”) gaining increased attention.

- establish a collaborative science-based information programme to enable citizens understanding of the dietary shift towards alternative proteins produced from biotechnology by launching a survey on citizens consumption patterns and dietary choices;
- improve the transfer of scientific knowledge at different levels (different actors and different territorial/geographical areas and socio-economic groups) with a collection of data on the perception, behaviours and understanding of citizens of alternative protein sources derived from different biotechnological applications;
- produce technical and dissemination material based on scientific evidence and knowledge, encompassing the technical and hygienic processing conditions for the production of alternative proteins through biotechnology and eventual consumption;
- provide recommendations for updating and improving educational curricula in schools and in other educational institutes as appropriate and in accordance with any applicable national, regional and local obligations;
- include the use of diverse communication media (e.g., social media, radio, TV, newspapers) to effectively disseminate information and engage with a broad audience.

The proposal should take into account the preliminary results developed by the project B-Trust ¹²³ funded under Horizon Europe and take advantage of and connect to European research infrastructures in the area of biotechnology such as EU-IBISBA.

Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

The proposal should involve the effective contribution of SSH disciplines.

The proposal must implement the 'multi-actor approach' and ensure adequate involvement of all relevant stakeholders including citizens, civil society organisations, authorities, public and private institutes/institutions, value chain actors to ensure acceptability, awareness and deployment. The active participation and engagement of different stakeholders should span the entire project development and implementation to ensure performance and sustainability and maximise the final impact.

To maximise the impacts of R&I, the collaboration with international partners, in particular with those established in the United States, is encouraged.

HORIZON-CL6-2025-02-FARM2FORK-14: Nutrients produced by microorganisms utilising primarily CO₂ from the air, with the support of biotechnology

Call: Cluster 6 Call 02 - single stage

¹²³ [Co-creation methodology for biotechnology trust-building measures for improved innovation uptake in the bio-based innovation system | B-TRUST | Project | Fact sheet | HORIZON | CORDIS | European Commission \(europa.eu\)](#)

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: the proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Technology Readiness Level</i>	Activities are expected to start from TRL 5 in order to achieve TRL 7 by the end of the project – see General Annex B.

Expected Outcome: In line with Food 2030 R&I initiative¹²⁴ and the Commission communication on: Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU¹²⁵, the successful proposal will address the application of the precision fermentation through genetically engineered microorganisms and will contribute to safer food systems. It will also promote innovation through the creation of new start-ups companies in the field of food production via biotechnology. The outcomes will foster EU strategic autonomy and leadership in delivering innovative nutrient production processes through business models for food applications in industrial plants and SMEs.

Project results are expected to contribute to all the following expected outcomes:

- the costs and resource-efficiency of bioreactors and upstream and downstream processing is delivered by industry or by other industry related actors (e.g., association, consultants, or engineering experts);
- the environmental and climate impacts resulting from the reduction of CO₂ in the air are better understood;
- food producing companies support the set-up of new or existing living laboratory facilities and pre-commercialisation infrastructure or shared infrastructure solutions to test the implementation of biotechnologies;

¹²⁴ [New Report: Food 2030 Research and Innovation – Pathways for action 2.0 - European Commission \(europa.eu\)](#). See pathway 6 ‘The Microbiome World’.

¹²⁵ COM (2024)137 final.

- innovative technologies are identified for the use of microorganisms that have been genetically engineered transforming CO₂ into nutrients for food purposes and scaled up by SMEs and innovative start-ups;
- existing pilot plants in Europe are improved to scale up the production by identifying and removing barriers that slow down the scaling up of the production of nutrients for food and food ingredients.

Scope: Innovations using microorganisms have the potential to deliver benefits in several fields, such as agriculture, food and feed, industries, environment, marine/aquatic and biodiversity. The use of microorganisms genetically engineered for precision fermentation is an innovative approach that could significantly contribute to safer food systems¹²⁶. This biotechnology leverages the capabilities of microorganisms to produce nutrients including enzymes, fats, and other valuable compounds with high efficiency and specificity. Therefore, it represents a key area for investments and research, promising to revolutionise the food system and to contribute to a healthier planet.

The proposals should address all the following activities:

- analyse and provide the costs and investments needed for the use of the biotechnology for scaling up production of nutrients through the use of genetically engineered microorganisms that capture CO₂ from the air and/or from on-site plant emissions;
- establish an open space database or platform for companies to create their own business models for precision fermentation using genetically engineered microorganisms and perform a pre-commercialisation testing alongside business model strategies development as well as also in situ application;
- establish business models for industry and for in-situ application, considering also gases other than CO₂;
- evaluate the sustainability, efficiency, and resilience of European companies that use precision fermentation with genetically engineered microorganisms and their contribution to reducing the presence of CO₂ in the air. Climate-related aspects should also be considered as far as possible;
- provide a scale-up feasibility analysis for the developed biotechnologies which should take into consideration in the design process the feasibility for up-scaling, already from the early stages.

The proposals must implement the 'multi-actor approach' and ensure adequate involvement of existing private companies in Europe, specifically the participation of SMEs and start-ups.

The proposals should include a dedicated task in the workplan and appropriate resources to collaborate with the projects funded under this topic.

¹²⁶

<https://link.springer.com/article/10.1007/s11367-022-02087-0>

The proposals are expected to establish links with Regional Innovation Valleys for the bioeconomy and food systems (RIV4BFS)¹²⁷ to encourage the deployment of technologies related to biotechnological processes across the EU regions.

If possible, cross-articulation with data spaces, and notably with the European Open Science Cloud (EOSC) should be foreseen, exploiting synergies and complementarities of the different approaches. Proposals are also encouraged to consider, where relevant, the services offered by European research infrastructures such as IBISBA or other relevant research infrastructures¹²⁸ as well as the services offered by the existing technology infrastructures.

To maximise the impacts of R&I, collaboration with international partners, in particular with those established in the United States, is encouraged.

HORIZON-CL6-2025-02-FARM2FORK-15: Additional activities of the European partnership on sustainable food systems for people, planet and climate

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 130.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 130.00 million.
<i>Type of Action</i>	Programme Co-fund Action
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The proposal must be submitted by the coordinator of the consortium under HORIZON-CL6-2023-FARM2FORK-01-9: European partnership on sustainable food systems for people, planet and climate. This eligibility condition is without prejudice to the possibility to include additional partners.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The evaluation committee will be composed partially by representatives of EU institutions. If the proposal is successful, the next stage of the</p>

¹²⁷ RIV4BFS is a thematic RIV's use case. RIV4BFS can involve actors from across the quadruple helix, meaning promoting a model of cooperation between industry, academia, civil society, and public authorities, with a strong emphasis on citizens and their needs. [The New European Innovation Agenda - European Commission \(europa.eu\)](#).

¹²⁸ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

	<p>procedure will be grant agreement amendment preparations. If the outcome of amendment preparations is an award decision, the coordinator of the consortium funded under HORIZON-CL6-2023-FARM2FORK-01-9: European partnership on sustainable food systems for people, planet and climate will be invited to submit an amendment to the grant agreement, on behalf of the beneficiaries.</p>
<p><i>Legal and financial set-up of the Grant Agreements</i></p>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>This action is intended to be implemented in the form of an amendment of the grant agreement concluded pursuant to topic HORIZON-CL6-2023-FARM2FORK-01-9.</p> <p>For the additional activities covered by this action:</p> <ul style="list-style-type: none"> • The funding rate is 30% of the eligible costs. • Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. • Financial support provided by the participants to third parties is one of the primary activities of this action in order to be able to achieve its objectives. The EUR 60 000 threshold provided for in Article 207(a) of the Financial Regulation No 2024/2509 does not apply. • The maximum amount of FSTP to be granted to an individual third party is EUR 10 000 000 for the whole duration of Horizon Europe¹²⁹. This amount is justified since provision of FSTP is one the primary activities of this action and it is based on the extensive experience under predecessors of this partnership. <p>The starting date of grants awarded under this topic may be as of the submission date of the application. Applicants must justify the need for a retroactive starting date in their application. Costs incurred from the starting date of the action may be considered eligible (and will be reflected in the entry into force date of the amendment to the grant agreement).</p>
<p><i>Total indicative budget</i></p>	<p>The total indicative budget for this topic is EUR 130 million committed in annual instalments over years 2025-2027 (EUR 35 million from the 2025 budget, EUR 45 million from the 2026 budget and EUR 50 million from the 2027 budget). The total indicative budget for the duration of the</p>

¹²⁹ However, if the objectives of the action would otherwise be impossible or overly difficult (and duly justified in the proposal) the maximum amount may be higher.

	partnership is EUR 175 million.
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Expected Outcome: The second and final instalment of the partnership is expected in continuation to contribute to expected outcomes specified in topic HORIZON-CL6-2023-FARM2FORK-01-9: European partnership on sustainable food systems for people, planet and climate, for continuation of the activities and the continuation of already agreed outcomes.

Scope: The objective of this action is to continue to provide support to the European Partnership identified in the Horizon Europe Strategic Plan 2021-2024 and that will be implemented under the topic HORIZON-CL6-2023-FARM2FORK-01-9: European partnership on sustainable food systems for people, planet and climate, and in particular to fund additional activities (which may also be undertaken by additional partners) in view of its intended scope and duration, and in accordance with Article 24(2) of the Horizon Europe Regulation.

The consortium which applied to and is under grant agreement preparations under HORIZON-CL6-2023-FARM2FORK-01-9: European partnership on sustainable food systems for people, planet and climate is uniquely placed to submit a proposal to continue the envisioned partnership. The foreseen consortium has expertise in relation to the objectives of the Partnership and the activities to be implemented by calls and internal activities. In practice, another consortium could not continue the activities of the Partnership underway without significant disruption to the ongoing activities, if at all.

The scope of the application for this call on the European partnership on sustainable food systems for people, planet and climate should focus on the partnership's co-created strategic research and innovation agenda for seven to ten years which includes inspiration for calls for research projects and horizontal activities to allow the Partnership to operate and to achieve its specific objectives. The application should also consider new and upcoming priorities, and this should be reflected in their upcoming work.

The partnership should seek to include additional partners, in particular from Member States and Associated countries not yet in the consortium funded under HORIZON-CL6-2023-FARM2FORK-01-9.

It is expected that the partnership organises joint calls on an annual base and therefore it should factor ample time to run the co-funded projects. The partnership should collaborate closely with relevant partnerships in Horizon Europe Cluster 6 and beyond, the partnership should describe specific activities foreseen to strengthen the synergies with other related Missions and Partnerships.

While the award of a grant to continue the Partnership in accordance with this call should be based on a proposal submitted by the coordinator of the consortium funded under HORIZON-CL6-FARM2FORK-01-9: European partnership on sustainable food systems for people, planet and climate and the additional activities (which may include additional partners) to be funded by the grant should be subject to an evaluation, this evaluation should take into

account the existing context and the scope of the initial evaluation as relevant, and related obligations enshrined in the grant agreement.

Taking into account that the present action is a continuation of topic HORIZON-CL6-2023-FARM2FORK-01-9: European partnership on sustainable food systems for people, planet and climate and foresees an amendment to an existing grant agreement, the proposal should also present in a separate document the additional activities and any additional partners, to be covered by the award in terms of how they would be reflected in the grant agreement.

Targeted international cooperation

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-02-FARM2FORK-16: Developing a joint AU-EU Agricultural Knowledge and Innovation System (AKIS) supporting the Food and Nutrition Security and Sustainable Agriculture (FNSSA) partnership

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply: the proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p> <p>The following additional eligibility criteria apply: due to the specific challenge of this topic, in addition to the minimum number of participants set out in the General Annexes, consortia must include at least three independent legal entities established in an African Union member state*.</p> <p>International organisations with headquarters in a Member State or Associated Country are exceptionally eligible for funding.</p> <p>Due to the scope of this topic, legal entities established in all African</p>

	Union member states* are exceptionally eligible for Union funding. * "African Union member states" includes countries whose membership has been temporarily suspended.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹³⁰ .

Expected Outcome: A successful proposal should support the European Green Deal priorities, contribute to the African Union-EU High Level Policy Dialogue on Science, Technology and Innovation and to the respective R&I partnerships on Food and Nutrition Security and Sustainable Agriculture (FNSSA) and on Climate Change and Sustainable Energy. Proposals should contribute to the climate objectives of the African Union and the EU, and to the commitments of the Kunming-Montréal Global Biodiversity Framework. Projects will therefore contribute to the expected impacts of this Destination by developing innovative tools and approaches to improve the resilience, adaptation to climate change and sustainability of agriculture and food systems in Africa.

Project results are expected to contribute to all the following expected outcomes:

- the understanding, sharing of experiences and science-policy interfaces are strengthened for agri-food system actors to improve knowledge flows and development of an effective AU-EU AKIS, in view of achieving the Sustainable Development Goals and in line with the FNSSA roadmap;
- R&I actors in AU and EU, including farmers, advisors, other business and service providers, and consumers, are better informed and integrated within a well-functioning joint AU-EU AKIS supporting the climate transition implementation of agroecological approaches both in Africa and in the EU;
- better experience sharing among AKIS actors in the EU and AU is achieved.

Scope: AKIS is defined as the combined organisation and knowledge flows between persons, organisations and institutions who use and produce knowledge for agriculture and interrelated fields. Technological, non-technological and social innovation should be considered in an AKIS. In the context of the FNSSA, developing an effective AKIS in close cooperation with the International Research Consortium on FNSSA will strengthen long-term sustainability and

¹³⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

foster the co-creation and flows of knowledge and innovation aimed at ensuring food and nutrition security and improving sustainability of agriculture through the agroecological transition and the adaptation to climate change.

Proposals should:

- identify, map and study the main AKIS actors and AKIS structures at different levels (local, national, regional) and their relationships in a set of countries in the African context to support the agroecological transition, in close cooperation with the FNSSA International Research Consortium;
- explore how to effectively and efficiently enhanced cooperation and knowledge flows between AKIS actors through activities at various geographical levels;
- develop relevant models and formulate operational recommendations for a joint AU-EU AKIS to improve resilience and sustainability of agrifood systems both in Africa and Europe;
- pilot and animate a joint AU-EU Agricultural Knowledge and Innovation System (AKIS) as a bi-continental networking and knowledge sharing platform linking African and European AKIS actors to exchange experiences and best practices on how to enhance co-creation and flows of knowledge and innovation aimed at food and nutrition security.

Proposal should contribute to the implementation of the short-term and medium-term actions outlined in the AU-EU Innovation Agenda in the priority area of Green Transition, particularly in the priority area of Green Transition (notably actions (4) and (5) among short-term actions and (1) and (3) for medium-term actions), and aim to translate R&I efforts into tangible business, products, services, development and employment opportunities in Africa and Europe. Proposals should be in line with the conclusions of the 2023 AU-EU Agriculture Ministerial Conference¹³¹ and support the African Free Trade Area. To leverage opportunities for furthering impact and outreach, proposals should frame an active collaboration with the project resulting from the call “HORIZON-CL6-2025-02-FARM2FORK-05-two-stage: Developing agroecology living labs and lighthouses for climate action under the Food and Nutrition Security and Sustainable Agriculture (FNSSA) partnership”.

Proposals should also contribute to the implementation of the Union for the Mediterranean (UfM) adopted R&I roadmaps by researchers, farmers and policymakers pertaining to climate change, particularly in the areas impact of water scarcity and drought in rural areas, sustainable agriculture production, biodiversity and changing climate.

Proposals must implement the ‘multi-actor approach’ to ensure the adequate involvement of the public authorities, advisory services and farmer organisations.

¹³¹ https://agriculture.ec.europa.eu/events/5th-african-union-au-european-union-eu-agriculture-ministerial-conference-2023-06-30_en

Proposals should adopt an inclusive approach that respects and integrates local knowledge and practices alongside technological and scientific expertise, where indigenous insights are enriched by innovative approaches and new technologies through mutual learning.

The JRC may contribute to foster synergies with the PANAP¹³² community, engagement with stakeholders, dissemination of results, notably to policy-makers, and through cooperation with the EC Knowledge Centre for Global Food and Nutrition Security.

HORIZON-CL6-2025-02-FARM2FORK-17: Nutrition in emergency situations - Ready-to-use Supplementary Food (RUSF) and Ready-to-use Therapeutic Food (RUTF)

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply: the proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p> <p>The following additional eligibility criteria apply: due to the specific challenge of this topic, in addition to the minimum number of participants set out in the General Annexes, consortia must include at least three independent legal entities established in an African Union member state*. The places of establishment of at least two of these legal entities must be in the same region, as defined by the African Union: see https://au.int/en/member_states/countryprofiles2.</p> <p>International organisations with headquarters in a Member State or Associated Country are exceptionally eligible for funding.</p> <p>Due to the scope of this topic, legal entities established in all African Union member states* are exceptionally eligible for Union funding. * "African</p>

¹³²

[DataM - PANAP official website - European Commission \(europa.eu\)](https://data.europa.eu/data-m)

	Union member states" includes countries whose membership has been temporarily suspended.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹³³.</p> <p>Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: Ready-to-use Supplementary Food (RUSF) and Ready-to-use Therapeutic Food (RUTF) rely often on imported components while local resources are not exploited. A sustainable and healthy food systems approach is needed for corrective action. Research and Innovation will increase the use of locally available sources of protein, micronutrients and fatty acids (plant-, marine-, and other locally available ingredients) in the local production and food processing of RUSF and RUTF, the latter in line with Codex Guidelines CXG 95-2022 in Africa. Identify options that allow for the safe use of new, locally produced, alternative supplementary foods to be certified by WHO and used, based on the health status of the child and the local conditions, as alternatives to the current ‘all RUTF’ approach. An approach that is more and more challenged by the increasing production and transportation costs, lack of access to beneficiaries, mainly in fragile and conflict affected countries and with a large carbon footprint.

The topic follows the Food 2030 approach, in particular its co-benefits on nutrition, climate, circularity and innovation and implements the FNSSA roadmap of the AU-EU research and innovation partnership. It is also part of a humanitarian-development-peace (HDP) nexus action.

Project results are expected to contribute to all the following expected outcomes:

- scaling up locally produced RUSF and RUTF will help improving access to the life saving nutrition products for more children in need;
- sustainable and locally produced RUSF and RUTFs will enable national governments to develop versions of these products that are best suited to the local context, having higher acceptability, and provide the regulatory frameworks to manufacturers for national

¹³³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

production in line with the relevant Codex Alimentarius Guidelines, such as CXG 95-2022;

- supporting African countries' governments in their effort of local production of energy, protein and micronutrient supplements contributing to the objectives of climate change adaptation and mitigation, sustainable and efficient management of natural resources, resilience and disaster risk reduction as well as protection and restoration of biodiversity.

In parallel research could be developed around new safe and efficacious, science based recipes that could complement and replace under specific circumstances, in collaboration with the Nutrition Technical Advisory Board and after the validation by WHO, the exclusive use of RUTF for persons not affected by severe acute malnutrition, while making sure that relevant quality criteria, information practices and use criteria are established (based on the child health status and local circumstances).

Scope: Research and innovation collaboration between Europe and Africa will help the African countries (health specialists, producers, seed companies, SMEs and food industries) to develop/ scale up the relevant and sustainable local production of RUSF and RUTF or any other types of supplements and related ingredients, using varieties adapted to local climate and agro-ecological conditions, thereby protecting and restoring biodiversity. Thereby contributing to reduce the climate footprint of production and transport in line with the objectives of climate change adaptation and mitigation and sustainable and efficient management of natural resources. Implement the multi-actor approach by involving a wide range of food systems actors and conducting inter-disciplinary research. Link up for clustering to other projects of the AU-EU research and innovation priorities, in particular linked to Food Systems transition projects and the wider range of projects in Food and Nutrition Security and Sustainable Agriculture (FNSSA), Climate Change and Sustainable Energy (CCSE) and the AU-EU Innovation Union using the network linkages to the CEA-First project and the International Research Consortium on FNSSA.

Innovation: Proposals should foresee a space for mentoring and accelerating innovative business concepts, including social innovation and upscaling in view of African or European food business entrepreneurs and start-ups with special consideration of women and the diaspora using cascading funding opportunities. Proposals should involve financial support to third parties e.g. to academic researchers, health institutes, start-ups, SMEs and other multidisciplinary actors, to, for instance, develop, test or validate developed assessment approaches or collect or prepare data sets or provide other contributions to achieve the project objectives. Consortia need to define the selection process of organisations, for which financial support will be granted. Maximum 20% of the EU funding can be allocated to this purpose. Proposals should involve contributions from the social sciences and humanities (SSH) disciplines.

Enabling sustainable farming systems

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-02-FARM2FORK-01-two-stage: Emerging and future risks to plant health

Call: Cluster 6 Call 02 - two stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹³⁴.</p>

¹³⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

	Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.
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Expected Outcome: Successful proposals should contribute to the objectives of the common agricultural policy, as well as to the European Green Deal's goals for resilient and sustainable agri-food systems, the EU biodiversity strategy for 2030, and support Regulation 2016/2031¹³⁵ on protective measures against pests of plants.

Successful proposals will deliver on the expected impacts of the destination by enabling agri-food systems to enhance the EU's strategic autonomy through promoting food security and long-term sustainability with multidisciplinary approaches, including One Health. They will also empower farmers and key actors in the agricultural sector to manage sustainable, efficient, profitable, and circular farming systems with low greenhouse gas emissions, contributing to climate-neutrality and resilience.

Project results are expected to contribute to all of the following expected outcomes:

- the understanding of drivers of plant pest emergence, including the influence of climate change, ecosystem degradation and globalisation, is increased;
- cost-effective preventive and/or curative measures to new and/or emerging plant pests are developed;
- economic, social, and environmentally sound solutions for effective pest management in farming and/or forestry in line with the principles of integrated pest management are developed;
- scientific support, recommendations, and policy advice are provided to strengthen plant health policies.

Scope: Plant health is crucial for agriculture, forestry, ecosystems, ecosystem services and biodiversity on a global scale. The current EU plant health legislative framework plays a vital role in protecting the EU from the introduction of new plant pests and as well as tackling existing plant pests more effectively. Maintaining healthy crops is increasingly challenging due to factors like climate change, biodiversity loss, globalisation, and international trade which accelerate the spread of pests and diseases. These threats can severely damage crops, native plants, and the environment, jeopardising agricultural sustainability, biodiversity, and food security.

To address these issues, proposals should target one or more new or emerging plant pests¹³⁶ (regulated, non-regulated, introduced or native) that are causing or likely to cause, significant socio-economic and/or environmental impact to agriculture and/or forestry in the EU and/or

¹³⁵ <https://eur-lex.europa.eu/eli/reg/2016/2031/oj>

¹³⁶ A pest is defined here as any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products (EU legislation, Regulation 2016/2031).

Associated Countries, well as the impact on trade and the wider environment, including soil and water, considering potential exacerbation under climate change¹³⁷. Within the scope of this topic are pests exhibiting an altered and higher probability of entry, establishment and spread in a new area that might be the result of changes in their biology or changes in agriculture or forestry pest management practice or rapid spread in new areas.

Proposals should:

- enhance understanding of pest(s) biology, introduction pathways, interaction with crop-soil ecosystems (if relevant), and mechanisms of spread, especially considering the challenges posed by climate change, biodiversity crisis, land use, and globalisation, thereby reducing uncertainties and lack of data in pest risk assessments;
- develop rapid and cost-effective tools and methods for preventing pest(s) entry, spread, and establishment; this includes early detection, surveillance, treatment¹³⁸, and (bio)control measures (including innovative agro-ecological practices), in line with sustainable and integrated pest management;
- assess the social, economic, and environmental impacts of plant pest(s) establishment and spread on farmers and/or forest owners and develop strategies to mitigate these impacts effectively;
- contribute to the identification of resistant and/or tolerant traits and explore agro-ecological processes as tools for pests regulation, enhancing the resilience and long-term sustainability of the sector;
- foster a holistic understanding and management of plant pests following a One Health approach, recognising the interconnection between people, animals, plants and their shared environment.

International cooperation with countries affected or threatened by the same pest(s) is strongly encouraged.

Proposals must implement the ‘multi-actor approach’ including a range of actors to ensure that knowledge and needs from various sectors such as research, plant health services, farming/forestry sectors, advisory services, and industry are brought together.

Results should benefit diverse farming systems/approaches, including conventional and organic farming.

Proposals may provide financial support to third parties (FSTP) to, for instance, develop, test and demonstrate tools and methods for early detection, surveillance, treatment, and (bio)control measures. A maximum of 10% of the EU funding should be allocated to this

¹³⁷ Applicants are expected to explain and justify the choice of pest(s) in alignment with the proposal’s objectives and the topic’s expected outcomes.

¹³⁸ See IPPC Secretariat. 2024. Glossary of phytosanitary terms. International Standard for Phytosanitary Measures No. 5. Rome. FAO on behalf of the Secretariat of the International Plant Protection Convention.

purpose. Consortia need to define the selection process of organisations, for which financial support may be granted.

Proposals are encouraged to consider, where relevant, the services offered by European research infrastructures and accredited laboratories ¹³⁹.

Proposals should ensure coherence and complementarities with ongoing relevant Horizon Europe projects and capitalise on existing relevant research findings and tools, included those developed under previous research projects.

The proposals should include a dedicated task in the workplan and appropriate resources to collaborate with the projects funded under this topic.

HORIZON-CL6-2025-02-FARM2FORK-02-two-stage: Open topic: Innovating for on-farm post-harvest operations, storage and transformation of crops into food and non-food products

Call: Cluster 6 Call 02 - two stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Technology</i>	Activities are expected to achieve TRL 6-7 by the end of the project –

¹³⁹ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>.

<i>Readiness Level</i>	see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: Successful proposals will support the European Green Deal goals for competitive, resilient and sustainable agri-food systems objectives, the common agricultural policy, the EU Climate Law, the EU bioeconomy strategy, and the successful implementation of the unfair trading practices directive as well as the EU's action plan for the development of organic production.

Project results are expected to contribute to all of the following expected outcomes:

- Farmers employ a wide range of innovative solutions to improve post-harvest handling, processing and storage of crops that contribute to environment and climate objectives;
- Farmers improve their position in the value chains and add value to their food and non-food products at farm level and thereby enhance their competitiveness;
- Farmers and SMEs benefit from new business models and increase their opportunities to engage in sustainable food and non-food value chains.

Scope: Under this topic, proposals should test, develop and pilot innovative solutions to support farmers to improve their position in the value chains, profit from leveraging the use of their agricultural produce and improve financial viabilities. Proposals should improve the climate and environmental performance of the resulting farmer's activities and businesses. Proposals should also foster new SME-led sustainable business models and increase the opportunities for farmers to benefit from on-farm transformation and/or storage of agricultural outputs for food and/or non-food purposes. If they relate to some of the topics covered by Horizon 2020 Calls 'Healthy and safe foods and diets for all' 2016-2017 or/and 'Empowerment of rural areas, support to policies and rural innovation' 2018-2020 or/and Horizon Europe calls "Fair, healthy and environmentally-friendly food systems from primary production to consumption" 2021-2022 and 2023-2024, the proposals should convincingly explain how they will build on and not duplicate them.

Innovations proposed should have a positive impact on environment as well as climate change mitigation and adaptation. Proposals should demonstrate practical applicability and be tailored to the needs of farmers and adapted to the seasonal character of raw material production.

Successful proposals should assess the impact of the proposed innovations on the overall sustainability (environmental, social, economic) of the farmers and business activities. The climate change mitigation and carbon footprint reduction potential of the proposed innovations should be analysed. Successful proposals should address the requirements from relevant EU regulatory frameworks, including where relevant needs for pre-market authorisation.

Proposals should perform economic cost-benefit analysis of the practical implementation of the innovations developed within the project. Proposals should describe an exploitation pathway tailor-made for the developed innovations through the different necessary steps (e.g. market research, manufacturing, regulatory approvals and licensing, IP management etc.) in order to accelerate exploitation of the results.

Proposed activities must apply the concept of the 'multi-actor approach' and allow for adequate involvement of relevant actors including farmers and SMEs. Proposals should benefit various farming systems/approaches, one of which should be organic farming. Proposals should develop publicly available diverse practice-oriented dissemination materials, e.g., audiovisual materials, brochures, presenting the innovations.

SME participation is expected. Proposals may involve financial support to third parties, particularly for farmers and/or SMEs providing and/or developing, testing, or validating the proposed innovative technologies/solutions. A maximum 30% of EU funding should be allocated to this purpose. Consortia need to define the selection process of third parties, for which financial support may be granted.

Transforming food systems for health, sustainability and inclusion

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-02-FARM2FORK-03-two-stage: Making food systems more resilient to food safety risks through the deployment of technological solutions

Call: Cluster 6 Call 02 - two stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.

<i>Type of Action</i>	Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 8 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>

Expected Outcome: The successful proposal will be in line with the European Green Deal priorities and the farm to fork strategy for a fair healthy and environmentally friendly food system. This topic is also in line with the overall challenges highlighted in the updated Food 2030 pathways for action 2.0 report, particularly on the food safety systems of the future pathway, this report was published in December 2023 by the European Commission.

Project results are expected to contribute to all the following expected outcomes:

- a new level of ambition and creativity is implemented to tackle innovation creation, enhancing the deployment of solutions in the field of food safety and/or food fraud using existing knowledge, available technologies (such as molecular methods, genomic strategies, photonics, biotechnology, etc.) and the results achieved by European framework programmes projects. The EU's strong knowledge base is translated into marketable results addressing the “innovation paradox” (i.e. the fact that knowledge does not always translate to marketable products and services);
- food systems become more resilient to food safety risks through the use and exploitation of available knowledge and technologies;
- increased food chain and food systems competitiveness creating close to the market impactful applications that will benefit and connect solutions for food systems actors (i.e., farming, raw materials and ingredients suppliers, food industry, etc.);

- increased complementarities and results uptake in the field of food safety and/or food fraud with past and existing European framework programmes projects, and synergies with programmes and their associated project results from the European Research Council (ERC) and the European Innovation Council (EIC);
- contribute to EU climate action: deployment of clean technologies in the food industry, to boost food manufacturing efficiency and reduce carbon footprint.

Scope: Proposals should contribute to all of the following aspects:

- in the areas of food safety and food fraud a lot of efforts have been invested in European framework programme projects generating knowledge and potential applications. Proposals should contribute to further develop existing knowledge and technological results in the areas to reach higher TRLs aligned with user's needs and estimating the potential impact on cost for the consumers;
- support innovation to foster advances along the food system implementing digital and technological solutions in high TRL's covering existing food safety and/or food fraud gaps. Proposals should develop and implement innovative solutions close to the market. This should be based on an initial food chain needs and technology gap analysis in the area of food safety hazards (including climate-related ones when applicable) and/or food fraud justifying the followed decision-making process. When selecting the food safety and/or food fraud technologies the most innovative clean technologies should be favoured in scenarios of equal conditions to reduce GHG emissions. The exploitation plan should include preliminary plans for commercialisation and deployment (feasibility study, business plan) indicating the possible funding sources to be potentially used;
- identify existing regulations and give recommendations about which technologies could use sandboxes to foster future commercialisation;

Activities are expected to achieve TRL 8 by the end of the project. Proposals should clearly define the TRL starting point for each involved technology and the plan to reach more advanced TRL.

Applicants should seek complementarities and leverage on the results of past and ongoing research and innovation projects (including projects under the same topic) in the areas of food safety and/or food fraud (i.e. HORIZON-CL6-2023-FARM2FORK-01-12, HORIZON-CL6-2024-FARM2FORK-01-3, HORIZON-CL6-2024-FARM2FORK-01-4 among others). Therefore, proposals should include a dedicated task, appropriate resources, and a plan on how they should collaborate with other ongoing projects under this theme. In the case of already finished projects applicants will define the best way to engage relevant stakeholders of such projects and the cooperation agreements (also in terms of technology transfer and intellectual property) that are needed.

Governmental and food safety regulatory authorities (i.e. EFSA) should, alongside with other stakeholders (startups, SMEs, investors, etc.) be involved. The multi-actor approach applies to this topic.

Proposals are encouraged to consider, where relevant, the services offered by European research infrastructures such as METROFOOD-RI (the infrastructure for promoting metrology in food and nutrition) or other relevant research infrastructures.

Proposals are also encouraged to consider citizens and societal engagement in their activities for the implementation of technological results better aligned with consumer's needs.

To achieve the expected outcomes, international cooperation is encouraged.

HORIZON-CL6-2025-02-FARM2FORK-04-two-stage: Research and innovation for food waste prevention and reduction at household level through measurement, monitoring and new technologies

Call: Cluster 6 Call 02 - two stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>

<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹⁴⁰.</p>
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Expected Outcome: Successful proposals will be in line with the European Green Deal priorities, the revised Waste Framework Directive and the EU’s climate targets for 2030 and 2050. Actions will also be in line with the overall challenges highlighted in the updated Food 2030 pathways for action report published in December 2023¹⁴¹ on food waste and resource efficient food systems.

Project results are expected to contribute to all of the following expected outcomes:

- successful implementation of the harmonisation of food waste measurement across Europe, supported by the development of new tools, and testing of existing ones, producing reliable and comparable data on food and waste at household level;
- alleviate the burden of reporting of household food waste data for Member States, by making use of technological innovations;
- understand the underlying causes of food waste at household level to help policymakers and stakeholders develop more efficient interventions;
- contribute to Members States’ reporting on their national food waste levels, in line with targets set by the Waste Framework Directive revision, with positive impacts on the reduction of food waste at household level, thereby reducing greenhouse gas emissions and pressure on natural resources.

Scope: In the EU, over 59 million tonnes of food waste (132 kg/inhabitant) are generated annually¹⁴², with an associated market value estimated at 132 billion euros.

Eurostat roughly estimates that around 10% of food made available to EU consumers (at retail, food services and households) may be wasted. At the same time, in 2023, 9.5% of the

¹⁴⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁴¹ European Commission, Directorate-General for Research and Innovation, Bizzo, G., Fabbri, K., Gajdzinska, M. et al., *Food 2030 – Pathways for action 2.0 – R&I policy as a driver for sustainable, healthy, climate resilient and inclusive food systems*, Publications Office of the European Union, 2023, <https://data.europa.eu/doi/10.2777/365011>

¹⁴² Eurostat (2024), *Food waste and food waste prevention – estimates*, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Food_waste_and_food_waste_prevention_-_estimates

EU population could not afford a meal with meat, chicken, fish or vegetarian equivalent every second day¹⁴³. In the EU, households generate more than half of the total food waste (54%).

Wasting food is not only an ethical and economic issue but it also depletes the environment of limited natural resources. Food waste has a huge environmental impact, accounting for about 16% of the total greenhouse gas emissions from the EU food system. Therefore, by reducing food waste we can also support the fight against climate change.

Proposals should contribute to all of the following aspects:

- develop and validate new tools and methods, and/or further test existing methods (including those developed by previous EU-funded projects), to measure and estimate food waste at household level, including the food waste discarded as or with wastewaters and that would help distinguish between amounts of avoidable (edible) fraction of food waste and non-avoidable (inedible) food waste. The potential of AI and other technologies (including ones that are currently available) to simplify the collection of data and the reporting (by being integrated in advanced monitoring solutions) should be considered. Interoperable metadata standards accompanying indicators coming from these new tools and methods should be provided. The metadata standards for edible and inedible food waste indicators should allow data to be federated through the European Open Science Cloud (EOSC) infrastructure;
- these new tools and methods should be applied across a large enough sample of diverse type of products and target groups (in terms of gender, age, socio-economic status, ethnic and/or cultural origins, etc.), allowing for a more precise assessment of food waste fractions (edible and inedible), across several years and in a significant number of Member States, and potentially in Associated Countries. This should generate robust measurement/estimation of food waste at household level for different target groups, at national level. The potential for extensive uptake of the proposed solution should be clearly highlighted;
- in addition to measurement, the direct and indirect drivers and root causes of food waste at household level should be thoroughly investigated. Particular attention should be paid to the identification of consumer behaviours (food consumption and disposal patterns) and other factors that influence food waste at household level, to assess the potential for a reduction strategy based on change in consumer behaviours.

In addition, proposals could explore eco-friendly, low-input and efficient technological solutions to prevent edible food from being discarded in households, e.g. by preventing product degradation.

The required multi-actor approach must be implemented by conducting inter- and trans-disciplinary research and involving a wide diversity of food system actors, with special attention paid to consumers and civil society organisations.

¹⁴³ Eurostat (2024), *Inability to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day*, https://ec.europa.eu/eurostat/databrowser/view/ilc_mdcs03/default/table?lang=en

Proposals are encouraged to build on past or ongoing EU-funded research (in particular, the EU-funded CHORIZO and WASTELESS projects, expected to be finalised in 2025) and on the work carried out by the European Consumer Food Waste Forum¹⁴⁴, and create synergies with relevant initiatives including the EU Platform on Food Losses and Food Waste.

This topic should involve the effective contribution of SSH disciplines. Citizen science is encouraged at all stages of the research activities for this topic and should be integrated in the research methodology. Proposals should take into account and address inequalities (e.g. by addressing the risk of AI bias in terms of gender, disability, ethnicity, etc.).

Targeted international cooperation

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-02-FARM2FORK-05-two-stage: Developing agroecology living labs and lighthouses for climate action under the Food and Nutrition Security and Sustainable Agriculture (FNSSA) partnership

Call: Cluster 6 Call 02 - two stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p> <p>The following additional eligibility criteria apply: The following additional eligibility criteria apply: due to the specific challenge of this topic, in addition to the minimum number of participants set out in the General Annexes, consortia must include at least three independent legal entities established in an African Union member state*. The places of</p>

¹⁴⁴

https://knowledge4policy.ec.europa.eu/projects-activities/european-consumer-food-waste-forum_en

	<p>establishment of at least two of these legal entities must be in the same region, as defined by the African Union: see https://au.int/en/member_states/countryprofiles2.</p> <p>International organisations with headquarters in a Member State or Associated Country are exceptionally eligible for funding.</p> <p>Due to the scope of this topic, legal entities established in all African Union member states* are exceptionally eligible for Union funding. * "African Union member states" includes countries whose membership has been temporarily suspended.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹⁴⁵.</p> <p>Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: A successful proposal should support the European Green Deal priorities, contribute to the African Union-EU High Level Policy Dialogue on Science, Technology and Innovation and to the respective R&I partnerships on Food and Nutrition Security and Sustainable Agriculture (FNSSA) and on Climate Change and Sustainable Energy. Proposals should contribute to the climate objectives of the African Union and the EU, and to the commitments of the Kunming-Montréal Global Biodiversity Framework. Projects will therefore contribute to the expected impacts of this Destination by developing innovative tools and approaches to improve the resilience, adaptation to climate change and sustainability of agriculture and food systems in Africa.

Project results are expected to contribute to all the following expected outcomes:

- the availability, accessibility and adoption by farmers, advisors and policymakers of fair and inclusive approaches and strategies that improve agricultural productivity and sustainability in Africa, while addressing climate challenges is accelerated, optimising the use of ecological processes with co-benefits for biodiversity;

¹⁴⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- the coordination and experience sharing among researchers and agricultural actors in Africa is strengthened, in view of achieving the Sustainable Development Goals and in line with the FNSSA roadmap¹⁴⁶;
- agri-food stakeholders benefit from enhanced climatic, environmental and socio-economic performance of African agroecological farming practices.

Scope: Agroecology is a holistic approach that relies on and optimises the use of ecological processes to support agricultural production. By working more with nature and ecosystem services, it has the potential to increase farms' circularity, diversification and autonomy, address climate challenges while preserving and enhancing biodiversity, and drive a full transformation of farming systems and agricultural value chains, from input substitution and beyond. Agroecological farming systems therefore have great potential to enhance the sustainability performance of agriculture and agricultural value chains that contribute to the objectives of the EU Green deal for agriculture and to the FNSSA partnership.

Living labs under this topic are intended as open innovation ecosystems in real-life sites using iterative feedback processes throughout a lifecycle approach of an innovation to create inclusive and sustainable impact.

While living labs are collaborative initiatives to co-create knowledge and innovations, lighthouses are sites for demonstration of exemplary and replicable solutions, training, peer-to-peer learning, and communications related to promoting agroecological approaches.

Proposals should:

- set up living labs and light houses as places for testing and demonstrating agroecological approaches in different pedoclimatic conditions in Africa;
- carry out participatory and transdisciplinary research and innovation activities in living labs with agricultural actors (e.g. researchers, farmers, advisors, policymakers), including on socio-economic aspects to support sustainability transitions and upscaling, to seek practical agroecological solutions to the climatic and biodiversity challenges/opportunities identified;
- identify sites that demonstrate high performance in terms of their actions and results on agroecology and that may be converted into lighthouses;
- strengthen interactions between existing living and new labs, light houses and like-minded arrangements on agroecology to share lessons and facilitate science policy interfaces using where relevant existing network arrangements, such as those under the Horizon Europe CEA-First project.

¹⁴⁶ https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/europe-world/international-cooperation/regional-dialogues-and-international-organisations/eu-africa-cooperation/partnership-food-and-nutrition-security-and-sustainable-agriculture-fnssa_en

Proposals should contribute to the implementation of the short- and medium-term actions of the joint AU-EU Innovation Agenda, particularly in the area of Green (notably actions (4) and (5) among short-term actions and (1) and (3) for medium-term actions), and aim to translate R&I efforts into tangible business, products, services, development and quality employment opportunities and social economy enterprises in Africa and Europe. Proposals should be in line with the conclusions of the 2023 AU-EU Agriculture Ministerial Conference¹⁴⁷ and support the African Free Trade Area.

Proposals should contribute to the implementation of the Union for the Mediterranean (UfM) adopted R&I roadmaps¹⁴⁸ pertaining to climate change, particularly in the areas impact of water scarcity and drought in rural areas, sustainable agriculture production and biodiversity in changing climate.

Proposals should build on the experience gained with relevant former and on-going FNSSA projects on agroecological approaches under Horizon 2020 and the Horizon Europe Work Programmes, as well as with activities of the DeSIRA¹⁴⁹ initiative part of the EU International Partnerships. At the same time, proposals should create synergies with any relevant activities carried out under the European Partnership “Agroecology” (‘Accelerating farming systems transition – agroecology living labs and research infrastructures’) and targeted EU-Africa cooperation activities under the EU Mission “A soil deal for Europe”. Proposals should include a dedicated task and appropriate resources to create those synergies. To leverage opportunities for furthering impact and outreach, proposals should create synergies with the project resulting from the call “HORIZON-CL6-2025-02-FARM2FORK-16: Developing a joint AU-EU Agricultural Knowledge and Innovation System (AKIS) supporting the Food and Nutrition Security and Sustainable Agriculture (FNSSA) partnership”.

Proposals should adopt an inclusive approach that respects and integrates local knowledge and practices alongside technological and scientific expertise, where indigenous insights are enriched by innovative approaches and new technologies through mutual learning.

Proposals must implement the ‘multi-actor approach’ to ensure the adequate involvement of the farming sector, civils society and relevant policy actors.

Participation of Mediterranean countries other than from EU and AU is encouraged.

The possible contribution of the JRC could involve exploring possible pathways for a sustainable transition of agriculture and food systems, defining scenarios for the agro-ecological transition, assessing the impacts of such transition, engaging with stakeholders, disseminating results notably to policymakers and through cooperation with the EC Knowledge Centre for Global Food and Nutrition Security.

¹⁴⁷ https://agriculture.ec.europa.eu/events/5th-african-union-au-european-union-eu-agriculture-ministerial-conference-2023-06-30_en

¹⁴⁸ <https://ufmsecretariat.org/ministerial-conference-research-innovation-2022/>

¹⁴⁹ https://international-partnerships.ec.europa.eu/policies/programming/programmes/desira-development-smart-innovation-through-research-agriculture_en

Proposals should ensure that gender dimension and social categories (e.g. disability, age, socioeconomic status, ethnic and/or cultural origins, sexual orientation) and their intersections, are duly considered.

Proposals may involve financial support to third parties to researchers, farmers, advisors and other multidisciplinary actors contributing to the setting up of living labs and/or lighthouses. A maximum 30% of EU funding should be allocated to this purpose. The provision of training (including technical guidelines and ad-hoc materials) and support services to farmers may be considered as a criterion to grant financial support to third parties.

DRAFT

Destination - Circular economy and bioeconomy sectors

Under Destination “Circular economy and bioeconomy sectors’, R&I in 2025 provides scientific and technological support to the European Green Deal, in line with the new Commission priority on “A new plan for Europe’s sustainable prosperity and competitiveness”.

Actions focus on the implementation of a wide range of EU initiatives such as the circular economy action plan and the upcoming Circular Economy Act, the EU bioeconomy strategy and its upcoming update, the forest strategy for 2030, and the Common Agriculture Policy. In addition, this Destination contributes to the industrial strategy, the chemicals strategy for sustainability, the European Climate Law, the SME strategy, the communication on safe and sustainable by design framework, the sustainable blue economy and its offshoot initiatives, the EU biodiversity strategy for 2030, the EU Nature Restoration Regulation, the proposals for an EU forest monitoring regulation and a directive on EU soil monitoring and resilience.

The Destination also upholds the upcoming working plan for the implementation of Ecodesign for Sustainable Products Regulation and research needs identified in the Global Resources Outlook 2024. In addition, it supports the EU social economy action plan and the Council Recommendation on developing social economy framework conditions which includes social economy entities in the circular economy.

Furthermore, it will support the EU biotechnology and biomanufacturing initiative, covering and underpinning sustainable bio-based innovation systems, as well as the Commission communication “A Competitive Compass for the EU”, the upcoming strategy for European life sciences and the EU biotech act. Also, it will support the capacity of bio-based systems to enable a sustainable carbon management and allow the better understanding of the carbon removal potential of circular bio-based economies. Through innovative circular and bio-based materials, products, processes and value chains for consumers and industry, the awareness and importance of agriculture and forestry in the EU will be strengthened. The destination will align with the Global Biodiversity Framework, the future science-policy panel to further contribute to the sound management of chemicals and waste and to prevent pollution and promote the new approach for the sustainable blue economy in the EU, which stresses that marine/aquatic biotechnology offers solutions for materials, enzymes, food supplements and pharmaceuticals.

R&I activities under this Destination will help establishing healthy, biodiverse and resilient forests that are sustainably managed and able of providing a wide range of key ecosystem services, including climate mitigation through carbon removals and continuing supplying materials and services for the development of a sustainable forest bioeconomy in line with the EU forest strategy for 2030.

Proposals for topics under this destination should set out a credible pathway contributing to “achieving healthy soils and forests, as well as clean air, fresh and marine water, whilst ensuring water resilience and the transition to a clean, competitive and circular economy and sustainable bioeconomy”, and more specifically to one or more of the following impacts:

- innovative circular and bio-based materials, products, processes and value chains are developed for the consumers and industry, replacing unsustainable alternatives and leading to new and more sustainable approaches for managing waste materials and by-products, aiming at pollution prevention and remediation, and the promotion of new forms of cooperation between diverse economic and societal actors across sectors and territories;
- industry and consumers benefit from new opportunities both through sustainable novel products in line with ecodesign principles, and novel circular business models that have a mitigating impact on resource use and greenhouse gas emissions;
- innovative business and governance models, are advanced to foster safe and sustainable product design. This includes durability, reliability, reusability, upgradability, reparability, recyclability, recycled content, and circularity with a comprehensive approach addressing environmental impacts also at a territorial level and involving civil society in fostering a circular economy;
- large-scale diffusion of social and technological innovation across circular and bioeconomy sectors within planetary boundaries thanks to innovative, socially fair, climate-neutral, circular, bio-based and nature-based solutions;
- the full potential of marine and freshwater biological resources and blue biotechnology is leveraged to deliver societal benefits, such as more environment-friendly industrial products and processes, support public health and environmental conservation;
- actors in the forest sector foster the multi-functionality of forests based on the three pillars of sustainability (economic, environmental and social), enhancing a sustainable and circular bioeconomy including support to business development; restoring and protecting biodiversity and ecosystems, ensuring that ecosystem services continue to be delivered including mitigating and adapting to climate change; and delivering societal expectations including well-being of different actors.

R&I fostering circular economy and other sectors under this Destination aimed at impacting or involving civil society will take into account the participation of disadvantaged groups based on gender and other social categories as appropriate.

The Horizon Europe work programme for 2025 will play a critical role in implementing the Ecodesign for Sustainable Product Regulation (ESPR). More sustainable and circular products will contribute to the resilience and competitiveness of the EU economy. Changes in consumer behaviour and availability of attractive service solutions will lead to waste prevention and tangible reduction in material and energy consumption and greenhouse gas emissions. R&I can link various EU policies, namely those with measures to create market demand for secondary materials related to the green and digital transitions, resilience and competitiveness.

Outcomes will ensure synergies with Cluster 4 – ‘Digital, industry and Space’, its partnerships and with Cluster 5 – ‘Climate, Energy and Mobility’. Full synergy and complementarity will be ensured with the fully operational EU partnership on ‘Circular Bio-based Europe’ (CBE Joint Undertaking), the EU partnership for a climate neutral, sustainable and productive blue economy and with the EU mission ‘Restore our Ocean and Waters by 2030’, as well as with the Soil mission. Furthermore, to maximise the local impact under this destination, synergies and complementarities with the Circular Cities and Regions Initiative (CCRI) and the New European Bauhaus (NEB) Facility are encouraged as appropriate. Coordination will be ensured with the long-standing EC Knowledge Centre for Bioeconomy. Possible synergies should be sought with other JRC activities. The destination will ensure synergies and complementarities with the future European Partnership “Forests and forestry for a sustainable future”. To maximise the impacts of R&I under this Destination, international cooperation is encouraged.

Enabling a circular economy transition

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-01-CIRCBIO-01: Novel circular business models to enable the just transition to a sustainable and circular economy

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: In supporting the implementation of the European Green Deal, and in particular the 2020 circular economy action plan (CEAP), the Waste Framework Directive and the Ecodesign for Sustainable Products Regulation (ESPR), successful proposals will contribute to the expected impacts of this Destination, notably to benefits for industry and consumers from new opportunities both through sustainable novel products in line with ecodesign principles, and to novel circular business models that have a mitigating impact on resource use and greenhouse gas emissions and contribute to increasing Europe’s sustainable competitiveness.

Project results are expected to contribute to all of the following expected outcomes:

- consumers obtain access to new circular products and services, such as reuse, repair and sharing, that encourage sustainable consumption and thus reduce the environmental footprint, greenhouse gas emissions, and the pressure on biodiversity;
- economic operators that want to introduce circular business models are provided with proved successful examples and recommendations how to do it;
- (re-)skilling programmes and new job opportunities emerge in the areas of re-use, preparing for reuse, repair, upgrade, refurbishment, repurpose, and remanufacture.

Scope: The green transition and moving to a circular economy will require changes not only in the way materials are used and products are designed, but also in the way companies operate and business models are set up. The majority of current business models and the global economic and trading system are based on linear and unsustainable use of materials and products. This results in ever-increasing consumption, depletion of resources, increase in CO₂ emissions and environmental deterioration, and undesirable generation of waste. The transition to a sustainable and competitive and circular economy necessitates transformative changes in material usage and corporate operations, with innovative business models able to trigger sustainable consumer behaviours and purchasing preferences. These models are pivotal in steering both industries and consumers towards sustainable practices, aligning with the comprehensive environmental objectives of the European Green Deal and the EU biodiversity strategy for 2030. The transition to a circular economy is key to reducing pressures on natural resources. It is also a prerequisite to achieve the EU's 2050 climate neutrality target and to halt biodiversity loss.

Novel circular business models can affect business-internal practices as well as interactions with other businesses or civil society. Proposals should develop and demonstrate at large scale innovative business models to facilitate product reliability/durability, reusability, reparability, refurbishment, repurpose and remanufacture, including the preparation stage, as well as product-as-a-service business models.

Proposals should assess and quantify, including monetisation, when possible, the environmental, social and economic impacts of these novel business models on relevant stakeholders, i.e., consumers, social partners, private companies with a focus on SMEs, municipalities and regions. The assessment of environmental impacts should be done from a lifecycle perspective and build on rules set in the Environmental Footprint methods wherever possible. Impacts of the business models on the overall resource efficiency and material use should also be assessed, as far as possible. Proposals should analyse the 'pull' factors that shift consumer choices in the direction of products/services offered by circular business models, as well as what can encourage more to do so. Ecodesign requirements laid down in the ESPR and EU Ecolabel aspects, and the verification of green claims should be considered where relevant.

Proposals should contribute to the development of innovative business models, including social economy entities and social enterprises, to enable the transition towards a circular and sustainable ecosystem and to stimulate the uptake of sustainable consumption patterns.

Proposals should address the opportunities of developing new business models in the context of the circular economy R-strategies (refuse, rethink, reduce, reuse, repair, refurbish, repurpose, remanufacture) as well as upgrade and product-as-a-service business models.

Proposals should include social innovation and explore understanding behaviours to identify routes towards an increase of demand for sustainable products and even towards an overall reduction of consumption and product/materials use, which includes products as a service. Proposals should also explore self-sufficiency approaches and promote regenerative practices aimed at restoring biodiversity, mitigating climate change, and strengthening local communities and social justice.

The proposals should address the different perspectives of all relevant actors in a proposed project, which could be actors involved in raw material sourcing, material processing and manufacturing, intermediate production, end-product manufacturing, as well as brand owners, retailers, enterprises, re-use and repair organisations, civil society/consumers, etc. Proposals should also reflect on how access to finance can be facilitated and how economic viability can be ensured, and how governance can promote the establishment of these new business models. Critical issues of change management, scaling and diffusion of solutions should be addressed.

Proposals should target specific social groups and their purchasing power while developing novel business models, in order to keep a fair transition to climate neutrality in mind. This includes possible questions of gender equality, diversity and inclusion. Also, proposals should assess the potential of and prerequisites for new job opportunities in the areas of reuse, preparing for reuse, repair, upgrade, refurbishment, repurpose and remanufacture, contributing qualitative and quantitative data to the reskilling programmes of the green transition.

For the development of novel business models, projects should include elements of fair and affordable pricing of services/labour within various R-strategies as well as upgrade and products-as-a-service models. In this context, projects should also analyse barriers to such models and possible regulatory, governance and economic solutions. Projects should also address possible unintended or rebound effects, both positive and negative, particularly for consumers and the environment, of such novel business models.

Proposals should explore the territorial and geographical dimensions of the establishment and success of new business models and aim at synergies with the New European Bauhaus and the Circular Cities and Regions Initiative (CCRI). Projects are strongly encouraged to organise joint activities, ensure synergies and undertake clustering activities with CCRI projects and the CCRI Coordination and Support Office. To avoid double-funding and to create added value, projects should seek synergies with projects to be performed under the LIFE-2024-SAP-ENV Call¹⁵⁰.

¹⁵⁰ https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/life/wp-call/2021-2024/call-fiche_life-2024-sap-env_en.pdf

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

HORIZON-CL6-2025-01-CIRCBIO-02: Improving ecodesign of products and development of testing methods for products prioritised under the Ecodesign for Sustainable Products Regulation

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹⁵¹ .

Expected Outcome: In supporting the implementation of the European Green Deal, and in particular the circular economy action plan (CEAP), the Ecodesign for Sustainable Products Regulation (ESPR), and the Right to Repair initiative, successful proposals will help reach the Green Deal objectives of lower resource consumption and less environmental impact. They will contribute to the expected impacts of this Destination, notably to innovative business and governance models that foster safe and sustainable product design.

¹⁵¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Project results are expected to contribute to all of the following expected outcomes:

- material and product manufacturers apply the ecodesign principles in developing and manufacturing products and are equipped with methods to assess the performance and potential compliance of their products with the ecodesign requirements to be developed under ESPR, as well to drive sustainability innovations;
- market surveillance authorities and notified bodies are equipped with methods for the verification of compliance of products with the ecodesign requirements;
- consumers have access to reliable and verified information about the ecodesign performance of products;
- consumers benefit from more sustainable and circular products, i.e. durable, reliable, repairable, reusable, upgradable, recyclable products including increased recycled content.

Scope: The Regulation on Ecodesign for Sustainable Products (ESPR)¹⁵² lays down requirements for products placed on the EU market to improve their environmental sustainability. First, the Commission adopts a working plan prioritising product groups, based on the prioritisation criteria laid down in the text of the regulation. Second, the Commission will develop targeted performance and information requirements known as ‘ecodesign requirements’ for prioritized products. This will be done on a product-specific basis or horizontally (for several product groups with similar technical characteristics which would allow requirements to be defined horizontally) through “preparatory studies”. The ecodesign requirements will need to address the environmental impacts of the product(s) in question in a meaningful way, making reference to the methodologies prescribed in the ESPR. The projects are expected to generate knowledge and data which will serve as a scientific basis for and feed into the consequent “preparatory studies”.

Each applicant should choose at least one of the following product groups¹⁵³: detergents, paints, chemicals, non-ferrous metals, home/interior textiles, footwear or toys. For the analysed product groups, proposals should include in the scope representative sub-categories of the product groups on the EU market making reference to relevant European, international and national classification systems and standards, where existing.

Projects are expected to:

- assess how product parameters (as per Annex I of the ESPR) relevant for circularity can be determined for the given product group and explore potential new parameters with the aim of improving the circularity performance of the product;

¹⁵² Regulation (EU) 2024/1781 of 13 June 2024 establishing a framework for the setting of ecodesign requirements for sustainable products, amending Directive (EU) 2020/1828 and Regulation (EU) 2023/1542 and repealing Directive 2009/125/EC, text [here](#).

¹⁵³ Products and product groups which have been prioritized by JRC in the study Ecodesign for Sustainable Products Regulation: Study on new product priorities https://circulareconomy.europa.eu/platform/sites/default/files/2024-12/JRC138903_01.pdf

- assess the performance of products in relation to the specific product parameters (following or building on the methods used in ESPR) and explore pathways to their improvement;
- focus on those product parameters having impact on product aspects contributing to circularity, i.e., durability, reliability, reusability, upgradability, reparability, possibility of maintenance and refurbishment, presence of substances of concern, resource use and resource efficiency, recycled content, possibility of remanufacturing and recycling, possibility of recovery of materials, expected generation of waste materials, and premature obsolescence, as well as social sustainability requirements, which are currently not covered by ESPR;
- develop, test and validate product-specific testing methods for the determination and verification of product performance in relation to the said specific parameters;
- provide analyses and recommendations for additional mechanisms and incentives to reward design for circularity and product durability – such as extended guarantees, VAT reduction, and others – and which best mitigate potential trade-offs;
- map the material flows relevant for the given product group and assess the impacts of potential requirements on these flows within and across value chains (requirement on e.g. recycled content in one value chain can impact availability of secondary raw material in another value chain, etc.);
- develop quantitative and qualitative data on relevant aspects of consumer behaviour in relation to the product parameters for the given product groups.

Proposals should take into account all provisions of the ESPR. The ESPR provisions aim at improving the overall sustainability of the product(s) in question, and by improving the product aspects set out in that regulation (see Art. 5; Annex I). In addition, the revised version of the MEERP methodology by JRC¹⁵⁴, and the Ecodesign for Sustainable Products Regulation: Study on new product priorities¹⁵⁵ published in 2024 should all be reference points. The series of standards on material efficiency for energy-related products EN455XX must be considered as well. In relation to the presence of substances of concern, building on the relevant provisions in the ESPR, the proposals should take into account the principles of Safe and Sustainable by Design (SSbD)¹⁵⁶ applied to chemicals and materials.

For the individual products within the product groups, the proposals should assess the existing methods for the setting of the eco-design requirements in relation to the specific parameters (as set out in Annex I of the ESPR) with the objective to improve the product aspects (as set out in Article 5 of the ESPR) and, as appropriate, develop them further based on the nature of the product, its most relevant aspects and its impacts over its life cycle. In doing so, the projects

¹⁵⁴ [Review of the MEERP - Publications Office of the EU \(europa.eu\)](https://publications.europa.eu/en/publication-detail/-/publication/11111111-1111-1111-1111-111111111111)

¹⁵⁵ Ecodesign for Sustainable Products Regulation: Study on new product priorities
https://circulareconomy.europa.eu/platform/sites/default/files/2024-12/JRC138903_01.pdf

¹⁵⁶ [JRC Publications Repository - Safe and Sustainable by Design chemicals and materials - Methodological Guidance \(europa.eu\)](https://publications.europa.eu/en/publication-detail/-/publication/11111111-1111-1111-1111-111111111111)

should make use of the work already done in assessing the setting of requirements under Directive 2009/125/EC and the continuing efforts to develop and improve science-based assessment tools, such as the updated Methodology for Ecodesign of Energy-related Products (MEErP).

Also, proposals should take into account: relevant technical information in particular of Regulation (EC) No 66/2010 on the EU Ecolabel, Directive 2010/75/EU on Industrial emissions (integrated pollution prevention and control), technical screening criteria adopted pursuant to Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment, the “do no significant harm” principles and green public procurement criteria.

The development of a product specific testing method should include not only the development of the method from the theoretical point of view, but also its proper testing and validation to evaluate its suitability, repeatability, and reproducibility in practice. Projects should demonstrate advances in the development and/or application of related digital/AI computational tools, methods or technologies in the area of assessing ecodesign requirements and developing methods for the verification of performance and involve relevant Member States Authorities responsible for enforcement.

As part of the project, proposals should address the knowledge gap in capacity and skills, especially for SMEs, potentially limiting the understanding of upcoming ecodesign requirements especially if trickling down from upstream in their product value chains as well as when conducting the assessments of compliance with ecodesign requirements. Learning and training materials should be developed for dissemination and training purposes within the relevant companies and value chains.

Successful proposals are encouraged to cooperate with the JRC to foster coordination with on-going JRC science for policy activities to foster the implementation of the European Sustainable Product Regulation.

HORIZON-CL6-2025-01-CIRCBIO-03: Product Environmental Footprint (PEF) of policy and market-relevant product groups

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions

<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹⁵⁷.</p>
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Expected Outcome: In supporting the implementation of the European Green Deal, and in particular the circular economy action plan (CEAP) and the Ecodesign for Sustainable Products Regulation (ESPR), successful proposals will contribute to the expected impacts of this Destination, notably addressing environmental impacts at a territorial level and involving civil society in fostering a circular economy.

Project results are expected to contribute to all of the following expected outcomes:

- improved knowledge for stakeholders on the value of a circular economy approach in addressing environmental pollution on air, soil and water and the pressures on biodiversity and ecosystems through the analysis of the environmental impacts of specific products;
- the development of sector-specific methods, data, tools and guidance documents for the assessment, communication and comparison of environmental impacts of targeted product groups, relying on Environmental Footprint (EF) methods;
- reduction of environmental impacts for a significant number of relevant products;
- engagement of stakeholders, including industry, public procurers, SMEs and NGOs, to enhance consistency, reliability and use of developed sustainability metrics and tools across sectors.

Scope: The circular economy action plan (CEAP) aims to stimulate the development of sustainable products, in the EU and beyond, contributing to the EU's 2050 climate neutrality target and to halt biodiversity loss. To achieve this, it establishes a sustainable product policy regulation that broadens the scope of the Ecodesign Directive both in terms of products (covering a very broad range of products, beyond energy-related products only) and new kinds of requirements. It will be key to achieve a sustainable, resilient and competitive circular economy.

Life cycle assessment (LCA) is a key source of information on environmental impacts of products, services or systems. The Commission proposed the Product Environmental

¹⁵⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Footprint (PEF)¹⁵⁸ as a common way of measuring environmental performance. The PEF methodology, grounded on the LCA standard methodology, allows manufacturers and consumers to obtain reliable and comparable information about the performance of products with respect to various environmental impact categories. A calculation based on the general PEF methods gives quantitative information on the impacts of products, taking into consideration the entire value chain.

R&I activities in the proposal should:

- review existing knowledge on LCA/PEF, identify and fill knowledge gaps and then develop and test PEF category rules for selected product groups of policy and market relevance;
- assess the added value and cost-benefit of these rules compared to other methods or criteria;
- perform in-depth full life cycle assessment studies (also addressing end-of-life aspects) based on PEF for those products groups to identify, quantify, interpret and communicate environmental impacts;
- develop appropriate datasets tailored to the assessed product groups identifying and filling data gaps, as much as possible based on industry and other representative data, and create tools which will be made publicly available to enable and ease PEF-compliant assessments and communications among stakeholders, as well as their verification;
- develop and apply approaches and methods to derive and support potential ecodesign requirements¹⁵⁹ from PEF-compliant assessments, i.e. how decisions for design with a lower environmental footprint can be motivated, and further assess their socio-economic impacts;
- develop and apply approaches and methods: a) to identify and check sustainability requirements used or proposed in legislation, labels and standards relevant for the products in study; b) to analyse how to enhance consistency, synergies and harmonisation between such requirements and ecodesign requirements;
- develop guidance, training and dissemination strategies and material to support the wider use of PEF in the selected sector(s).

Proposals should focus on at least one of the following product groups: home/interior textiles; final products made of metals, or plastics; detergents; lubricants, paints and varnishes; polymers; selected groups of other chemicals; ICT products.

¹⁵⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021H2279;> https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202401781. The current recommendation for PEF is the recommendation 2021/2279 which is now being revised with the target of having a new recommendation for 2025.

¹⁵⁹ Ibid.

For the analysed product groups, proposals should target a sufficiently broad and granular scope, targeting comprehensive representative sub-categories and products on the market. In doing that, proposals should refer to relevant European, international, and national classification systems and standards where possible. Projects should adhere to the most recent EU rules and data¹⁶⁰ established for the PEF methods and bring together all relevant expert groups and different stakeholders active along the value chains of the selected product groups (industry members, researchers, SMEs and NGOs).

Proposals should develop appropriate and comparable datasets for assessing the analysed products as well as tools and digital solutions to facilitate the sharing and processing of information along the value chain as well as the assessment, communication and verification of environmental characteristics of products based on the PEF method.

As part of the project, proposals should also address the knowledge gap in capacity and skills, especially for SMEs, potentially limiting the understanding, conducting and implementing of PEF-based assessments. Learning and training materials should be developed for dissemination and training purposes within and across companies and value chains.

The data produced in this topic should be open access in line with FAIR principles (Findable, Accessible, Interoperable and Re-usable). Furthermore, different tasks, outputs, interactions with stakeholders, and communication, dissemination and exploitation activities should be conceived in a logical sequence along the lifetime of the project.

HORIZON-CL6-2025-01-CIRCBIO-04: Development and testing of Extended Producer Responsibility schemes (EPR) within the priority Circular Economy Action Plan value chains

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>

¹⁶⁰ Ibid.

<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.
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Expected Outcome: In supporting the implementation of the European Green Deal, the 2020 circular economy action plan, the upcoming Circular Economy Act, the Waste Framework Directive and the Ecodesign for Sustainable Products Regulation, successful proposals will contribute to achieving improved circularity in selected product value chains and improving the efficiency of separate collection and waste management systems. They will contribute to the expected impacts of this Destination, notably improving the durability, reliability, reusability, repairability, recyclability and circularity of consumer products.

Project results are expected to contribute to all of the following expected outcomes:

- demonstrated innovative solutions for large scale uptake and implementation of Extended Producer Responsibility (EPR) schemes, providing for their application by producers, producer organisations and relevant actors across the EU and Associated Countries, including cross-border cooperation.
- improved knowledge of economic operators (including SMEs) and consumers regarding EPR schemes and eco-modulation of EPR fees, and how these contribute to increasing circularity, minimising the demand for primary resources, reducing GHG emissions, preventing environmental pollution and reducing the pressure on biodiversity and ecosystems.
- optimal functioning and increased uptake of EPR schemes in specific priority product value chains within the EU and Associated Countries, i.e.: construction products, ICT products, furniture, mattresses, and carpets.

Scope: The 2020 circular economy action plan introduces measures that aim at making sustainable products the norm, contributing to the EU's 2050 climate neutrality target and to halt biodiversity loss. It focuses on resource-intensive sectors with the highest circularity potential such as textiles, plastics, packaging, electronics including ICT products, furniture and construction products.

EPR schemes can contribute to improve circularity gaps in key product value chains with high circularity potential, given its full lifecycle approach. They make producers responsible for the entire lifecycle of the products made available on the market, from the design-phase up to their end of life, including waste collection and recycling. These schemes can be a lever for producers, including SMEs, to design their products for circularity considering sustainability criteria and have been proven successful in improving the management of waste in products such as packaging and batteries.

R&I activities in proposals should:

- develop, test and demonstrate operational solutions for large scale implementation of EPR schemes that consider the eco-modulation of EPR fees for one or more of the

following product value chains: construction products, ICT products, furniture, mattresses, and carpets;

- develop and test novel circular business models and solutions linked to EPR schemes for the above-mentioned product value chains, supported by ecodesign requirements¹⁶¹;
- assess the economic, environmental and social cost-benefits of the implementation of EPR schemes for the relevant stakeholders, especially for consumer and producers (with a focus on SMEs);
- develop and test the application of dedicated digital technologies, such as the digital product passport (pre-consumer) and tracking applications (post-consumer), to collect evidence within those product value chains and facilitate producers' registration and the exchange of information between national EPR schemes;
- provide policy recommendations for specific elements of an EPR scheme that incentivises waste prevention and/or minimisation (e.g., ecodesign, reuse, preparation for reuse, repair and refurbishment, remanufacturing and recycling) and facilitate cross-border cooperation.

Proposals should consider the global perspective within the national EPR schemes, as frequently the value chains mentioned above are established at a global scale and producers may be situated outside of the EU. This may apply to new products made available on the EU-market or waste from post-consumer products managed outside the EU. They should also include the case of online platforms, given the increase of online sales and the associated potential risks of free-riding economic operators, as well as cross-border cooperation mechanisms.

Projects should bring together all relevant stakeholders active in the selected product value chains (industry members, local authorities, waste management operators, SMEs, economic operators, producer responsible organisations (PROs), consumer organisations, researchers, and NGOs).

This topic requires the effective contribution of SSH disciplines, namely economics and sociology, and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

The JRC may provide expertise in circular economy policy and foster coordination with on-going related activities and participate, potentially, in the projects Scientific Advisory Board.

HORIZON-CL6-2025-01-CIRCBIO-05: Consumption patterns and environmental awareness as enablers of transition to circular economy

Call: Cluster 6 Call 01 - single stage

¹⁶¹ https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202401781

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>

Expected Outcome: In supporting the implementation of the European Green Deal, and in particular the 2020 circular economy action plan (CEAP), the Waste Framework Directive, the upcoming Green Claims Directive, the EU Ecolabel and the Ecodesign for Sustainable Products Regulation (ESPR), successful proposals will contribute to the expected impacts of this Destination, notably to benefits for industry and consumers from new opportunities both through sustainable novel products in line with ecodesign principles, and novel circular business models that have a mitigating impact on resource use and greenhouse gas emissions.

Project results are expected to contribute to all of the following expected outcomes:

- increased awareness of consumers of the importance of their choices, and of available sustainable and circular purchasing and use options, and demonstrated willingness to change their consumption behaviour accordingly; value of making circular purchasing decisions has been demonstrated to consumers;
- guidance is made available to public authorities and civil society organisations on how awareness about sustainable and circular consumption decisions can be increased and how decisions for consumption with a lower environmental footprint and lower greenhouse gas emissions can be motivated;
- circularity-related knowledge and skills of economic operators including product designers are strengthened, with the intention to make sustainable circular products and services more attractive to consumers, in view of their benefits in terms of reduced pollutant and GHG emissions and reduced pressure on biodiversity and ecosystems. .

Scope: The transition to a circular economy is key to reducing pressures on natural resources. It is also a prerequisite to achieve the EU's 2050 climate neutrality target and to halt biodiversity loss. Sustainable consumption and production are key elements in the societal transition to a competitive circular and sustainable economy. Decoupling economic activities and human well-being from natural resource use and environmental impacts is essential and necessary. As part of the transition, with the emergence of circular and sustainable products,

consumers will play an even more important role in making sustainable choices. Consumer empowerment encourages sustainable choices, which in return contribute to pollution reduction and climate neutrality.

Proposals should address the gaps in public awareness about the environmental impacts of the mainstream consumption patterns and between prevalent consumer knowledge/awareness and actual behaviour. Proposals should make use of social innovation and should analyse and identify the economic, social, behavioural, psychological, technical and legal barriers and levers for the uptake of circular and sustainable products, solutions and services. The analysis should address relevant aspects of fairness, equality, diversity, inclusion, and gender.

Proposals should first assess the patterns and underlying motivations of consumption habits through experimentation within various cultural, geographical, social, demographic, and economic groups. Based on this assessment, projects should draw and evaluate possible pathways to behavioural change of various economic actors (municipalities, companies including retailers and service providers, end-users) to enable the transition to circular and sustainable economy. These pathways should show how to change the demand for products and services with high environmental impacts and resource intensity, towards more circular and sustainable ones, including used and second-hand products, sharing services, reparability and durability. Possible environmental impacts in this context should be seen from a lifecycle perspective, including and valuing in monetary terms environmental externalities and building on rules set in Environmental Footprint methods wherever possible. The pathways should include policy, governance and business recommendations in all relevant areas (economic, behavioural, educational, technical, legal, cultural, etc.).

Power imbalances between industry and civil society should be addressed, and the impact and potential of Ecodesign, Ecolabel, green claims, and of digital infrastructures and Digital Product Passports should be explored with a view to changing vantage points and consumer behaviour.

Convincing narratives, framing strategies and storytelling tactics should be developed, improving knowledge of selling points, i.e., which features and qualities make a product or service attractive for consumers.

Proposals should explore the territorial and geographical dimensions of consumption patterns, and aim at synergies with the New European Bauhaus and the Circular Cities and Regions Initiative (CCRI). Proposals are strongly encouraged to organise joint activities, ensure synergies and undertake clustering activities with CCRI projects and the CCRI CSO.

For this topic, the engagement of citizens and civil society in the project activities is central to achieving the targeted outcomes. This topic also requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals are encouraged to consider, where relevant, the services offered by European research infrastructures such as ESS ERIC or other relevant research infrastructures¹⁶².

The JRC may provide expertise in circular economy policy and foster coordination with on-going related activities and participate, potentially, in the projects Scientific Advisory Board.

HORIZON-CL6-2025-01-CIRCBIO-06: Indicators for the transition to sustainable and circular economy

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-6 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁶³ .

Expected Outcome: In supporting the implementation of the European Green Deal, and in particular the 2020 circular economy action plan (CEAP), successful proposals will contribute

¹⁶² The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

¹⁶³ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

to the expected impacts of this Destination, notably to innovative business and governance models and innovative circular materials, products, processes and value chains.

Project results are expected to contribute to all of the following expected outcomes:

- increased knowledge about suitable indicators for measuring the progress and level of circularity in local communities, households, or in value chains at different company levels, as well as associated impacts, including on greenhouse gas emissions, and using Environmental Footprint methods and the derived Consumption Footprint;
- recommendations are made available on how to develop these indicators further, including for the collection of necessary data;
- guidance and recommendations are made available to local public authorities, social economy entities and financial institutions on how to use these indicators in their circularity-supporting activities.

Scope: The EU circular economy monitoring framework has been developed to monitor the progress of the EU and Member States in the circular economy transition. It uses aggregated macroeconomic indicators suitable for understanding how the whole economy changes. At the microeconomic level, i.e., at the level of individual economic agents such as companies, households or investors, or at the level of small territorial units such as cities or regions, no formal monitoring system exists besides the criteria set under the Taxonomy Regulation for Sustainable Activities that are set at activity level. However, more and more economic agents start to use CE indicators either for their internal decisions or for communication with their business partners, clients or the public. The European Commission's Joint Research Centre and the European Environment Agency¹¹ are currently doing research into circularity indicators in specific areas. The European Commission also launched a stocktaking exercise in the form of a contract for the development and testing of indicators and methods for measuring transition to climate-neutral circularity, its benefits, challenges and trade-offs under the Horizon Europe work programme for 2021.

A number of different indicators are currently used for this purpose, often with low information value or outright erroneous and misleading. Several organisations attempted to develop more robust indicator systems and offer them to their members or clients. While this effort is useful, none of these organisations has the authority to propose a monitoring system that would be accepted by a majority of economic actors and stop the proliferation of micro-level CE indicators. The European Commission is in the unique position to convene relevant stakeholders and facilitate the process of development of harmonised CE micro-economic monitoring indicators. Financial institutions are turning to the European Investment Bank (EIB) to organise a similar process to harmonise the monitoring indicators suitable for financial institutions.

Projects should develop and test a set or several sets of simple and meaningful indicators for monitoring of progress towards circular economy at the level of individual economic agents, i.e., in cities and regions, in households, or at different company levels. These indicators

should allow circularity monitoring for the addressed entities, but also help public administration and financial institutions in their decision-making in support of circularity transition measures. Proposals should test the operability of these indicators in the public/private investor environment, or in municipal/regional governance.

If within a project several separate sets of indicators are developed for different users, these should be compatible and possibly have a common set of core indicators.

Proposals should also thematise reasons for and benefits from the use of these circularity indicators and present convincing arguments. Proposals should take a lifecycle perspective and consider available instruments such as the consumption footprint indicator.

Project results will be of relevance for the Circular Cities and Regions Initiative (CCRI). Projects are therefore strongly encouraged to organise joint activities, ensure synergies and undertake clustering activities with CCRI projects and the CCRI CSO.

The JRC may provide expertise in circular economy policy and foster coordination with on-going related activities and participate, potentially, in the projects Scientific Advisory Board.

HORIZON-CL6-2025-01-CIRCBIO-07: Demonstration, deployment and upscaling of circular systemic solutions in cities and regions (Circular Cities and Regions Initiative)

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: at least 3 different demonstration and 6 replication cities/regions must be part of the consortium as beneficiaries.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: In supporting the implementation of the European Green Deal, and in particular the 2020 circular economy action plan (CEAP), a successful proposal will contribute to various expected impacts of this Destination, notably by supporting the development of innovative circular solutions as well as innovative business and governance

models, and fostering social, technological and non-technological innovation across sectors and value chains at local and regional level.

Project results are expected to contribute to all of the following expected outcomes:

- increased circularity and reduced GHG emissions in the economic sectors, services and product value chains at local and/or regional scale, and efficient valorisation of local resources, with positive effects on air quality and biodiversity;
- widespread deployment and easier replication, scalability and visibility of circular systemic solutions for a multiplication of their economic, social and environmental benefits;
- enhanced collaboration and knowledge transfer between the cities, regions and their partners, and increased uptake and stakeholder engagement in their circular and climate-neutral practices.

Scope: Proposals are expected to implement and demonstrate circular systemic solutions for the deployment and upscaling of the circular economy in cities and regions. The main objective is to stimulate social innovation through new circular innovative technologies, novel governance and business models in order to contribute to climate mitigation and help reduce pressures on natural resources, whilst increasing Europe's competitiveness.

This CCRI-related topic does not target specific technologies or industrial sectors, but supports the implementation of a systemic approach. This means that the implemented circular systemic solutions should involve relevant circular economy stakeholders in the targeted cities/regions, and address several (at least two) sectors and value chains – as set out in the 2020 circular economy action plan¹⁶⁴.

Proposals should select their circular systemic solutions and related economic sectors (e.g. construction and buildings, transport and mobility, bioeconomy, land use and spatial planning) based on a detailed analysis of the cities' and regions' socio-economic and environmental needs, as well as their local circular potentials.

Proposals should monitor and evaluate the implementation and the impacts of their circular systemic solutions through the project lifespan. This should include the identification, analysis, and when feasible, quantification of the economic, social and environmental benefits and other results. By doing so, proposals could take into consideration various social variables (e.g. gender, age, socio-economic status). In this case, proposals should involve the effective contribution of SSH disciplines.

Proposals should facilitate knowledge and experience transfer for further outreach and replication across EU Member States and Associated Countries. They should therefore clearly identify the lessons learned from the demonstration projects, specifying the enabling

¹⁶⁴ The CEAP focuses on the sectors and value chains that use most resources and where the potential for circularity is high such as: electronics and ICT, batteries and vehicles, packaging, plastics, textiles, construction and buildings, food, water and nutrients.

framework, the main (regulatory and/or market) barriers and the enablers, the business case as well as any other relevant factors for successful replication and upscaling in other cities and/or regions. In that respect, proposals should include a clear action plan to communicate experiences and results to ‘replicators’. This is essential for ensuring that circular systemic solutions demonstrated in specific areas are replicated in others, and where feasible, at larger scale.

Proposals should define financing strategies for their circular systemic solutions as part of their exploitation plan. Proposals should also foresee financing follow-up, for instance by linking with the Circular Cities and Regions Initiative financial advisory services (including the Horizon Europe funded Project Development Assistance Projects¹⁶⁵ and the European Investment Bank’s Circular City Centre¹⁶⁶).

Selected proposals will support the implementation of the European Commission’s Circular Cities and Regions Initiative (CCRI).

This topic targets public local and regional authorities or their groupings in EU Member States and Associated Countries. Proposals should support the inclusive engagement and active participation of all relevant circular economy stakeholders in the targeted cities and regions, such as policymakers (at all governance levels), research bodies and academia, the civil society, the private sector (industry, entrepreneurs, start-ups, small and medium enterprises etc.), social economy entities and financial intermediaries. Moreover, proposals should ideally consider different typologies (urban/peri-urban/rural), sizes (towns/cities) and/or geographical areas. Multi-actor Approach (MAA) and social innovation are encouraged.

Proposals should clearly specify how they will ensure synergies and complementarities with other relevant circular economy projects and initiatives, including those recognised as CCRI Projects¹⁶⁷ and CCRI Associated Partners¹⁶⁸. In that sense, proposals should include a dedicated task, appropriate resources and a plan on how they will collaborate with the CCRI office, projects and partners.

In particular, proposals are expected to organise joint activities and undertake clustering activities (e.g. thematic working groups, joint events, joint R&I gap analysis and policy briefs) with CCRI projects sharing a common theme and/or addressing similar issues. The proposals are also expected to ensure that their dissemination plan includes dedicated (possibly joint) actions for promotion of their results and lessons learned on the official CCRI website¹⁶⁹ of the European Commission and through other CCRI-related channels. Both clustering and dissemination activities will be facilitated and supported by the CCRI

¹⁶⁵ https://circular-cities-and-regions.ec.europa.eu/ccri-projects?f%5B0%5D=type_of_action%3A183

¹⁶⁶ <https://advisory.eib.org/about/circular-city-centre.htm>

¹⁶⁷ List of CCRI Projects from Horizon 2020 and Horizon Europe: <https://circular-cities-and-regions.ec.europa.eu/ccri-projectshttps://circular-cities-and-regions.ec.europa.eu/ccri-projects>.

¹⁶⁸ List of CCRI Associated Partners: <https://circular-cities-and-regions.ec.europa.eu/associated-partners>.

¹⁶⁹ Official CCRI website: <https://circular-cities-and-regions.ec.europa.eu/>

Coordination and Support Office¹⁷⁰ and aim to ease knowledge exchange, foster solution replication and up-taking as well as maximise impact.

Linkages with relevant initiatives such as the Hubs for Circularity¹⁷¹, the Regional Innovation Valleys¹⁷², the New European Bauhaus and the Climate-Neutral and Smart Cities Mission should be explored – whenever relevant.

Innovating for sustainable bio-based systems, biotechnology and the bioeconomy

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-01-CIRCBIO-08: Bioprospecting and optimized production of the terrestrial natural products: new opportunities for bio-based sectors

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 11.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Successful proposals should contribute to a clean, competitive and circular economy and sustainable bioeconomy, through the integration of bioprospecting/biodiscovery, biotechnology and biomanufacturing, enabling the deployment of innovative circular and climate-neutral bio-based materials, processes and value chains with higher resource efficiency and market value.

Project results are expected to contribute to all of the following expected outcomes:

- demonstrating the broadened range of more sustainable and more accessible natural bio-based products from terrestrial ecosystems with high value market applications;
- demonstrating advances in the development and/or application of related computational tools and methods or technologies, such as AI etc. in the biodiscovery pipeline;

¹⁷⁰ [About – CCRI office | Circular Cities and Regions Initiative.](#)

¹⁷¹ [Hubs4Circularity \(h4c-community.eu\).](#)

¹⁷² [Selected Regional Innovation Valleys | Research and Innovation.](#)

- increased commitment to biodiversity preservation and conservation through enabling bioproduction routes (biosynthesis, fermentation, culturing) of natural products, ensuring that the biodiscovery of new compounds does not lead to unsustainable harvesting from the wild, to ensure a sustainable use of genetic diversity;
- awareness raising and creation of a better framework for biotechnology and bio-based innovation and uptake through broad stakeholder engagement, supporting the EU biotechnology and biomanufacturing initiative.

Scope: The action covers modern biodiscovery approaches, including full integration of digital-driven, ‘-omics’ and associated bioinformatic tools¹⁷³, which make possible the identification and further upscaling (optimized production) of bioactive natural compounds with potential high-value application in various bio-based sectors including pharmaceuticals, nutraceuticals, cosmetics, food/feed additives, agrochemicals, cleaning etc. In the context of this topic, the natural products are understood as biologically active products such as secondary metabolites as well as enzymes derived from terrestrial organisms. New products should be safe and sustainable following the SSbD approach.¹⁷⁴

The scope covers immense diversity of terrestrial micro- and macro-organisms and their communities, which represents a rich and largely unexplored reservoir of natural products and their base ingredients (e.g. plants, fungi, microorganisms etc are in scope. The biochemical interplay between interspecies communities, e.g. symbiotic or defence mechanisms may offer attractive leads and is also in scope). For the coverage of aquatic bioprospecting see parallel topic HORIZON-CL6-2025-01-CIRCBIO-14: Bioprospecting of marine natural products in the -omics & artificial intelligence era.

The aim of this action is to broaden the range of novel compounds, lowering the production costs, quicken the development pipeline, and enable more innovation for the industrial operators, with clear-cut benefits for the final users (consumers and industries). The biodiscovery pipeline may cover in silico prospecting, genomic characterisation, creation of natural product libraries, bioactivity screening, chemical structure elucidation, natural products isolation and purification, and/or optimized production pathways via biotechnology and biomanufacturing approaches (including via gene editing) in suitable industrial facilities (bioreactors/biorefineries, e.g. microbial production), or synthetic biology approaches.

Targeted terrestrial biological resources can be sourced from their natural environment (in-situ) and/or from public and private collections and gene-banks (ex-situ).

The integration of digital approaches and tools (AI, computer algorithms such as machine learning, modelling, data science, digital twins etc) on optimizing the biodiscovery processes such as identification of biosynthetic gene clusters and metabolic pathways, enzyme selection, combinatorial assembly and annotation of high-throughput DNA sequencing data, bioactivity prediction, elucidation of the structure of compounds, experimental design etc is in scope (see

¹⁷³ Related to e.g. statistics, algorithms, AI, data science, modelling etc.

¹⁷⁴ Commission Recommendation (EU) 2022/2510 of 8 December 2022 establishing a European assessment framework for ‘safe and sustainable by design’ chemicals and materials.

the parallel topic HORIZON-CL6-2025-01-CIRCBIO-09: Unleashing the potential and advancing the impact of the digitalization/AI of the bio-based value chains).

Safety to the end-users, and operators needs to be assessed and guaranteed.

The action needs to avoid overlaps to past or ongoing topics (e.g. projects funded under the topic HORIZON-CL6-2022-CIRCBIO-02-05-two-stage - Life sciences and their convergence with digital technologies for prospecting, understanding and sustainably using biological resources, or the topic HORIZON-CL6-2023-CIRCBIO-01 - Broadening the spectrum of robust enzymes and microbial hosts in industrial biotechnology), consider synergies to parallel actions (e.g. HORIZON-CL6-2025-01-CIRCBIO-14 - Bioprospecting of marine natural products in the omics and artificial intelligence era), as well as funded under topic HORIZON-2020-FNR-11-2020: Prospecting aquatic and terrestrial natural biological resources for biologically active compounds¹⁷⁵. Also, links to the actions under the Circular Bio-based Europe Joint Undertaking (CBE JU) may be established, as relevant.

Proposals should take into account the findings of the Global Resources Outlook 2024 of the International Resource Panel.

Projects will have a strong industry/SME focus and include demonstration activities to proof the techno/economic viability of the production of the proposed terrestrial natural product(s) and/or the biodiscovery platform tools combining digital approaches and tools and biotechnologies.

The action needs to guarantee biodiversity preservation. This can be addressed, inter alia, by covering propagation of biological material, including by in vitro cultivation, as well as by biotechnological approaches. The aim is to decrease of pressure on wild resources and ensure higher overall sustainability, with policy dialogue with competent authorities; projects need to comply with applicable EU regulations and international rules on access to biological resources, such as UN Convention on Biological Diversity and its Nagoya Protocol, their sustainable use and the fair and equitable sharing of benefits from their utilisation. A sustainability assessment should be carried out to evaluate the environmental, economic and social performance of the developed product(s). Proposals should contribute to understanding of potential trade-offs inherent in the exploitation of ecosystems, and their potential to deliver ecosystem services. Any risks to the ecosystems should be assessed and minimised, along the application of the Do-No-Significant-Harm (DNSH) principle.

Proposals should include a task dedicated to sharing methodologies and findings with projects funded under this topic and with similar recent or ongoing projects.

International cooperation is encouraged, for win-win outcomes and mutual benefits.

¹⁷⁵ https://cordis.europa.eu/programme/id/H2020_FNR-11-2020/en.

HORIZON-CL6-2025-01-CIRCBIO-09: Unleashing the potential and advancing the impact of the digitalization/Artificial Intelligence of the climate-neutral bio-based value chains

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Successful proposals should contribute to a clean, competitive and circular economy and sustainable bioeconomy, through the integration of digital solutions/AI, enabling the deployment of innovative circular and climate-neutral bio-based materials, processes and value chains with higher resource efficiency.

Project results are expected to contribute to all of the following expected outcomes:

- the sustainability, resilience and the strategic autonomy of the European bio-based industry is improved due to the unleashing the full potential of Artificial Intelligence (AI), digitalisation and IT solutions, supporting the bio-based innovation;
- the opportunities on more sustainable feedstocks, more productive and efficient industrial processes and operations, and products, including via increased circularity, biodegradability, and due to better understanding of the carbon removal potential of bio-based systems, are advanced and demonstrated;
- improved understanding of risks and benefits based on new inclusive assessment methods, taking on board advances on technical and social innovation level.

Scope: There is an unprecedented amount of data available in the bio-based sector today, among others, from the ever-growing ‘-omics’ technologies and integration of sensors and the Internet of Things (IoT) devices. Big data and analytics solutions allow bio-based actors, in particular, the bio-based industry, but also other R&I and civil society stakeholders, to tap into this wealth of data to drive innovation and sustainability. Operators already use the bioinformatics solutions but there is still much potential to explore undiscovered bio-based systems, improve processes and develop cleaner solutions (e.g. see parallel topics HORIZON-CL6-2025-01-CIRCBIO-14: Bioprospecting of marine natural products in the omics &

artificial intelligence era, and HORIZON-CL6-2025-01-CIRCBIO-08: Bioprospecting and optimized production of the terrestrial natural products: new opportunities for bio-based sectors).

AI enables also the bio-based operators to automate a wide range of processes, helping them scale up their operations. Using AI image analysis or leveraging deep learning can be used to analyse microbiomes, screen phenotypes, and develop rapid diagnostics in a vast range of applications. Use of AI to predict best metabolic pathways for biosynthesis, optimize/engineer enzymatic activities, and virtually test several variables can speed up bioprocesses' development, while helping to reduce costs and deliver novel molecules for the market. Also, streamlining biorefineries with AI can lead to several levels of productivity gains. Moreover, systemic and integrated modelling approaches can optimise the rational deployment of bio-based value chains.

The action will first, explore the potential of AI and other digital technologies and tools in the bio-based sector and, next, focus on developing new capacities, high-quality tools and algorithms of AI and other digital technologies and tools to be demonstrated for the most promising (in terms of impact on environmental sustainability and competitiveness) applications of this sector. In this context, the concept of a 'digital twin'¹⁷⁶ could be explored. Generative artificial intelligence is in scope, if relevant to the proposed concept.

In line with the current definition of the EU bioeconomy strategy, health biotechnology sector is not in scope.

The scope covers all relevant aspects of the contribution of AI/digital methodologies and tools capable of delivering the high sustainability gains (resource efficiency, circularity, climate neutrality etc), as well as enhance the European industrial competitiveness (in particular in regard to improved quality of bio-based products, strategic autonomy, resilience and role of innovative SMEs). The proposals should demonstrate the upscaling from the current potential, align it to parallel actions on AI and other digital technologies and tools (e.g. database development, predictive capacities, EU-level initiatives (e.g. EU AI Act, Biotechnology and Biomanufacturing Initiative), and incorporate the systematic assessment of the risks and opportunities for the sector.

Multi-actor Approach (MAA) and social innovation are encouraged, especially to address the societal concerns and perceptions on the role of AI in the bio-based innovation and broader bioeconomy (e.g., impacts on skills and job opportunities/risks). All relevant stakeholders and value chain actors are in scope. Links to the Circular Bio-based Europe Joint Undertaking (CBE JU) operations are strongly encouraged. Proposals should also consider citizens engagement and dialogue, for seeking wider input and support, and encourage social innovation approaches.

¹⁷⁶ A digital twin is a digital representation of a physical object, person, or process, contextualized in a digital version of its environment. Digital twins can help an organization simulate real situations and their outcomes, ultimately allowing it to make better decisions.

Proposals should take into account the findings of the Global Resources Outlook 2024 of the International Resource Panel. Any risks to the ecosystems should be assessed and minimised, along the application of the Do-No-Significant-Harm (DNSH) principle.

The action will serve to develop guidelines for the policy makers, industry and civil society, in an inclusive co-creation process.

Proposals should include a task dedicated to sharing methodologies and findings with projects funded under this topic and with similar recent or ongoing projects.

Proposals should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, as well as data from relevant Data Spaces. Proposals are encouraged to consider, where relevant, the services offered by European research infrastructures such as IBISBA or other relevant research infrastructures¹⁷⁷.

International cooperation is encouraged, e.g. with countries mentioned in the EU biotechnology and biomanufacturing initiative communication, such as United States of America, Japan, South Korea, and India, for win-win outcomes and mutual benefits.

HORIZON-CL6-2025-01-CIRCBIO-10: Support to the EU Biotechnology and Biomanufacturing Initiative: scoping action

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the</p>

¹⁷⁷ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁷⁸ .
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Expected Outcome: Successful proposals should contribute to a clean, competitive, safe, fair and circular economy and sustainable bioeconomy, through the integration of biotechnology and biomanufacturing, supporting the innovative, circular and climate-neutral bio-based sector.

Project results are expected to contribute to all of the following expected outcomes:

- improved uptake of the solutions in the context of the EU biotechnology and biomanufacturing initiative¹⁷⁹, as related to the bio-based sector (e.g. by SMEs, and start-ups) and broader bioeconomy including by ensuring consumers' rights and needs (e.g., increased transparency, co-creating solutions that have high potential for uptake by consumers and stakeholders);
- higher environmental sustainability, including of biomass uses for the development of new bio-based materials and products, replacing fossil- or less environmentally - friendly bio-based ones, and overall innovation capacity, enabled by the technical solutions and stakeholder engagement. This will focus on sharing best practice and inclusive participation across the EU and society;
- improved awareness on the level of EU, national and regional policy making, based on scientific excellence and inclusive co-creation process with relevant stakeholders;
- development of an EU vision and strategic research and innovation agenda to foster biotechnology and biomanufacturing solutions to address EU economic security risks and global challenges like climate change or biodiversity protection.

Scope: The action will first take stock of the large number of funded actions on biotechnology and biomanufacturing (EU – including European Partnerships (in particular, under Circular Bio-based Europe Joint Undertaking (CBE JU)), EU Missions, and European research infrastructures programmes in the area of biotechnology such as EU-IBISBA, as well as others on the national, regional, and international level), related to industrial, environmental, marine and agri-food biotechnology (note: in line with the current definition of the EU bioeconomy strategy, health biotechnology is not in scope), as well as parallel broader scientific advances on the same topics.

Areas of interest could cover CRISPR-Cas gene editing, synthetic biology, digital technologies, including as advanced under the EU-funded projects, e.g. project GENECON, funded under topic HORIZON-CL6-2021-ZEROPOLLUTION-01-08: New

¹⁷⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁷⁹ [Nature-based solutions - European Commission \(europa.eu\)](https://ec.europa.eu/commission/presscorner/detail/en/ip_24_137) COM(2024) 137 Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU

genomic techniques (NGT): understanding benefits and risks – focus on bio-based innovation, projects DETECTIVE and DARWIN, under topic HORIZON-CL6-2023-FARM2FORK-01-11: New detection methods on products derived from new genomic techniques for traceability, transparency and innovation in the food system etc., as well as social developments (trust-building measures, evidence-based policy making, social innovation (e.g. project B-TRUST, funded under topic HORIZON-CL6-2023-GOVERNANCE-01-6: Co-creation and trust-building measures for biotechnology and bio-based innovation systems). Also, the action may take into consideration the outputs from the parallel topics, such as HORIZON-CL6-2025-01-ZEROPOLLUTION-02: Environmental impacts from the production of agricultural crops for bio-based industrial systems, or HORIZON-CL6-2025-02-FARM2FORK-13: Raising citizen awareness on alternative proteins, including those derived from biotechnology, as well the results of the European Commission study on “Supporting the green transition via the EU Industrial Strategy: opportunities and challenges for bioeconomy, through bio-based industrial systems and biotechnology in the EU”.

The action will then provide scientifically robust assessment of the social, economic and environmental benefits and risks of biotechnologies and biomanufacturing and deliver recommendations in form of a consolidated EU vision and research and innovation agenda, on future trends and main innovation avenues. This action will contribute to the implementation of the EU biotechnology and biomanufacturing Initiative, in particular by developing guidance to stakeholders, such as SMEs, start-ups or civil society.

It should also explore the role of biotechnology and biomanufacturing in terms of knowledge needs around the potential positive impacts and potential risks of biotechnology, including on biodiversity and ecosystems, e.g., resource efficiency, sustainable biomass management, impacts on air, water and soil quality or capacity of bio-based systems to enable a sustainable carbon management and better understanding of the carbon removal potential of bio-based economies.

Furthermore, the action should inform the policy makers on national level, as an input to new or updated national bioeconomy strategies or roadmaps. Given that biotechnology has been identified as a critical technology from the economic security perspective¹⁸⁰, due to its cross-cutting nature, and also as one of the technologies prioritised in the Strategic Technologies for Europe Platform (STEP) Regulation¹⁸¹, such aspects should be covered by the present action.

Proposals should take into account the findings of the Global Resources Outlook 2024 of the International Resource Panel. The proposals under the topic should ensure best use of outcomes from previous projects on biotechnology (some of which are already referenced in the topic), for building consumer trust regardless of regulatory status of the products. To promote this, mapping use cases from past projects should be included. Furthermore,

¹⁸⁰ Commission Recommendation (EU) 2023/2113 of 3 October 2023 on critical technology areas for the EU’s economic security for further risk assessment with Member States.

¹⁸¹ Proposal for a Regulation of the European Parliament and the Council establishing the Strategic Technologies for Europe Platform (‘STEP’) and amending Directive 2003/87/EC, Regulations (EU) 2021/1058, (EU) 2021/1056, (EU) 2021/1057, (EU) No 1303/2013, (EU) No 223/2014, (EU) 2021/1060, (EU) 2021/523, (EU) 2021/695, (EU) 2021/697 and (EU) 2021/24, COM/2023/335 final.

synergies with projects on biotechnology/biomanufacturing pilot infrastructure, such as projects Pilots4U and Copilot (under BBI-JU and CBE-JU, respectively) is encouraged, given they may enable the accessibility to pilot infrastructure to bring biotech/biomanufacturing initiatives to the market.

International cooperation is encouraged, e.g. with countries mentioned in the communication on the EU biotechnology and biomanufacturing initiative, such as the United States of America, Japan, South Korea, and India, for win-win outcomes and mutual benefits.

This topic should involve the effective contribution of SSH disciplines.

HORIZON-CL6-2025-01-CIRCBIO-11: Demonstration of reduced energy use and optimised flexible energy supply for industrial bio-based systems

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 11.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Successful proposals should contribute to a clean, competitive and circular bioeconomy, through the development of innovative and climate-neutral bio-based processes.

Project results are expected to contribute to all the following expected outcomes:

- bio-based industries' operators increase the uptake of innovative low-energy bio-based processes and the use of renewable energy in the processes and utilities of the industrial assets to progress towards climate neutrality and reduction of emission of air pollutants related to energy consumption;
- industrial bio-based systems improve their resilience against energy provision issues.

Scope: Key elements of circular economy applicable to industrial bio-based processes and technologies include increasing their energy and resource efficiency. In fact, on one side, industrial bio-based systems may be affected by a higher energy consumption; on the other side, energy supplies may experience shortage and/or price fluctuations that make the most

energy-intensive sectors more vulnerable. Industrial bio-based systems within the scope of this topic do not include food/feed, biofuels, bioenergy and cultural/recreation sectors.

Proposals should select one or more case-studies of bio-based industrial systems, within the scope of the topic, in the EU and Associated Countries and:

- describe how to improve energy efficiency, developing and implementing, for example: energy efficient (thermal) separation technologies (e.g., membrane distillation); fast and energy efficient drying processes of biomass (e.g., for wood residues, algae residues, and other residual streams); optimized catalysts, enzymatic processes and reactors to save energy, etc.. analyse the rebound effect of energy saving measures and how to address them;
- analyse the nexus water-energy in the processes of the selected bio-based industrial systems and how the reduction of water consumption contributes to energy saving, e.g., in separation and purification processes, as well as how to address the water-energy integration within the factory by considering the whole processes and all the utilities;
- describe how to enable energy consumption flexibility through the optimization of processes with faster response rate to be flexible to variable energy supply, (e.g., by slowing production when less energy available, and prices are high, or increasing the production and/or storing energy and energy carriers onsite when surplus of energy is available, and prices are low);
- analyse the implementation of renewable energy use in the selected bio-based industrial systems, including shifting from fossil-based to renewable resources and/or shifting to electrification;
- include a task in the project to demonstrate the solutions analysed under the previous four bullet points, to i) improve energy efficiency; ii) integrate water-energy nexus; iii) enable energy consumption flexibility; iv) use renewable energy. Such solutions should be demonstrated on one or more of the selected case-studies, and should be optimized, also through the applications of digital tools including based on artificial intelligence. Assess the contribution to climate neutrality of the selected solutions.

For increased resource efficiency (water and energy use) and circular economy (e.g. minimisation of waste generation or raw materials use) in large industrial installations, please refer to the Innovation Centre for Industrial Transformation and Emissions (INCITE) (<https://innovation-centre-for-industrial-transformation.ec.europa.eu/>).

The multi-actor approach is encouraged.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

HORIZON-CL6-2025-01-CIRCBIO-12: Harmonizing and optimising composting plants performances in Europe

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁸².</p>

Expected Outcome: Successful proposals should contribute to a clean, competitive and circular economy and sustainable bioeconomy, through the involvement of waste management operators, enabling the deployment of innovative circular bio-based materials and more sustainable approaches for managing waste materials.

Project results are expected to contribute to all the following expected outcomes:

- local authorities and operators responsible for the waste management improve the territorial deployment of individual or centralised composting plants;
- waste management operators in the EU and Associated Countries share best practices on harmonized performances of composting plants and the optimization of their environmental performances reducing the impacts on air/water/soil.

Scope: From 31 December 2023, EU Member States must collect bio-waste separately. The Waste Framework Directive allows waste which complies with relevant standards for packaging recoverable through composting and biodegradation, to be collected together with bio-waste. For example, the collection of bio-waste with industrially compostable plastic bags

¹⁸² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

is encouraged (Communication on “EU policy framework on biobased, biodegradable and compostable plastics” COM(2022)). However, industrial composting facilities in the EU are often unable to biodegrade such packaging due to different performances of composting processes than those required for the biodegradation of compostable packaging compliant with the standard EN 13432. Harmonization of the performances of industrial composting plants in the EU would help meeting the targets for bio-waste collection and the quality of resulting compost.

Proposals should:

- analyse the technical performances of industrial composting plants, with a special focus on the treatment of compostable packaging, at EU and at global scale. Compostable packaging in the EU is compliant with the standard EN 13432. The analysis should address the environmental impacts of composting plants, including emissions of pollutants to air/water/soil, emissions of odours and energy consumption, and the quality and safety of the product (e.g., control of pathogens in compost), also monitoring potential changes in the microbial communities in presence of compostable materials;
- include a task for the project to select ad hoc performance parameters to define the best practices of industrial composting plants, ensuring the full biodegradation of compostable packaging;
- describe how the project will deliver a collection and assessment of the best practices of industrial composting, at EU and global level, ensuring the full biodegradation of compostable packaging, and will individuate promising innovation, e.g., microbial bioaugmentation strategies to improve composting performances in a range of conditions, to generate high quality compost, and/or to biodegrade pollutants commonly present in compost waste (i.e., microplastics);
- include a task for the project to provide recommendations towards the harmonization of EU industrial composting processes and conditions, ensuring the full biodegradation of compostable packaging sustainably and safely and delivering safe and sustainable compost, as well as recommendations on improving the environmental performances of such plants, in terms of emissions of pollutants to air/water/soil and of odours.

International cooperation and multi-actor approach, including the involvement of waste managers in municipalities, are encouraged.

HORIZON-CL6-2025-01-CIRCBIO-13: Reconstructing areas affected by conflicts: the role of the bio-based solutions

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately.

<i>project</i>	Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 3-5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁸³ .

Expected Outcome: In line with EU policies, in particular the European Green Deal, the bioeconomy strategy and the climate adaptation strategy, successful proposals will support bio-based and nature-based solutions to deliver on EU international commitments and outreach, including actions directed at future EU enlargement, EU international partnership and humanitarian aid, contributing to the EU global commitments on biodiversity and climate change.

Project results are expected to contribute to all of the following expected outcomes:

- advanced mapping and assessment of local problems and needs and the opportunities and synergies of both bio-based innovation and of nature-based solutions, for the reconstruction of areas affected by conflict;
- enhanced and more rapidly accessible uptake and community co-creation of more sustainable bio-based solutions, aimed at restoration efforts;
- promotion of the ‘build back better and greener’ concept, at all government levels and by different stakeholders, contributing to climate adaptation;

¹⁸³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- enhanced understanding and engagement of the policymakers and society stakeholders of the role of bio-based innovation, at relief efforts, underpinned by principles of scientific excellence, sustainability, circularity and inclusiveness.

Scope: The recent wars, some of which are taking place at or near the EU borders, in particular the unprovoked and unjustified war of aggression of Russia on Ukraine, and the humanitarian catastrophe in Gaza, are causing not only tragic loss of human life and human suffering, but also serious environmental degradation, across ecosystems, terrestrial and aquatic, and in consequence biodiversity loss. Beyond the EU's borders, conflicts and fragility also persist where communities are affected by recurring or endemic conflicts with no real efforts to reconstruct, much less to build back better and greener. In this context, the options for the reconstruction process offered by the innovative bio-based solutions should be explored and seized. There is also a clear urgency to assess the resilience of solutions, map and deploy the remedies arising from both bio-based innovation and from nature-based solutions to address the reconstruction of such areas, both rural, coastal and urban, to promote the 'build back better and greener' concept, thus contributing to adaptation to climate change.

The action covers the development of practical solutions to achieve reconstruction efforts and strategies for restoring and 'renaturing' destroyed areas, made possible by bio-based innovation (including, i.e. the role of biotechnology, digital solutions, or bio-based construction materials), taking into account the circular and cascading use of biomass principles, local valorisation of underutilised biological residues, using nature-based solutions for their potential for bringing back biodiversity and restoring areas degraded or destroyed by conflicts, and overall, more sustainable and more environmentally-friendly management of biological resources. The aspect of the disaster risk reduction can be also included, if relevant. Covering the potential use of the bio-based innovation and nature-based solutions and their interplay in the humanitarian relief sphere and preparing for the deployment of concrete and human-centric applications is strongly encouraged. The higher sustainability of circular bio-based materials should be confirmed by the LCA approach, as much as possible.

Synergies with ongoing projects are encouraged, e.g. those funded under topics HORIZON-CL6-2023-CIRCBIO-01-06: Bio-based solutions for humanitarian applications or HORIZON-CL6-2023-GOVERNANCE-01-05: Revitalisation of European local (rural/peri-urban) communities with innovative bio-based business models and social innovation, upcoming topics (e.g. HORIZON-CL6-2025-01-ZEROPOLLUTION-03: Environmental biotechnology applications in service of restoration of polluted ecosystems, as well as with the actions supported under the New European Bauhaus (NEB) Facility. In addition, synergies with the EU Mission on Climate-neutral and Smart Cities, and with LIFE projects, are encouraged, notably the ones which contributed to the Ukraine Green Recovery Conference ¹⁸⁴.

Proposals should include a task dedicated to sharing methodologies and findings with projects funded under this topic and with similar recent or ongoing projects (some of which are referenced in the topic).

¹⁸⁴

[Ukraine Green Recovery Conference - European Commission \(europa.eu\)](https://european-council.europa.eu/media/en/press-room/pages/press-room-detail.aspx?lang=en&id=12345)

Proposals should take into account the findings of the Global Resources Outlook 2024 of the International Resource Panel.

Social Sciences and Humanities aspects, including gender dimension, social innovation are to be covered, to ensure an inclusive engagement of all key stakeholders. The multi-actor approach (MAA) is encouraged.

The action will provide recommendations to policymakers and EU and international relief organisations, to develop any replication actions, including in the context of the possible EU accession process, if relevant. International cooperation is strongly encouraged.

The JRC may provide support in research activities related the application of circular and bio-based materials in the rapid rebuilding of conflict-affected regions.

Innovating for blue bioeconomy and biotechnology value chains

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-01-CIRCBIO-14: Bioprospecting and optimised production of marine/aquatic natural products in the omics & artificial intelligence era

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Successful proposals should contribute to reaching the impacts of this destination, and European policies, in particular the European Green Deal, the bioeconomy strategy, the new approach for a blue economy. They should help harnessing the full potential of marine and freshwater biological resources and blue biotechnology is leveraged to deliver societal benefits, such as greener more environmentally friendly industrial products and processes, support public health and environmental conservation.

Project results are expected to contribute to all of the following expected outcomes:

- demonstrating the broadened range of more sustainable and more accessible marine/aquatic natural products with high value applications;

- demonstrating advances in the development and/or application related computational tools such as AI etc. in the biodiscovery pipeline;
- increased commitment to biodiversity preservation and conservation through enabling bioproduction routes (biosynthesis, fermentation, culturing) of natural products, ensuring that the biodiscovery of new compounds does not lead to unsustainable harvesting from the wild and a sustainable use of genetic diversity;
- awareness raised and creation of a better framework for blue biotechnology innovation and uptake through broad stakeholder engagement, supporting the EU biotechnology and biomanufacturing initiative.

Scope: The immense diversity of marine/aquatic micro- and macro-organisms and their communities represents a rich and largely unexplored reservoir of natural products and their base ingredients. To survive in habitats ranging from deep-sea sediments to polar regions or shallow waters, marine organisms have developed a broad spectrum of structures, defense mechanisms and metabolic pathways resulting in natural products with vast chemical diversity and wide range of biological activities. The biological interplay between interspecies communities, e.g. symbiotic or defence mechanisms, may offer attractive leads and is also in scope. For the coverage of terrestrial bioprospecting see parallel topic HORIZON-CL6-2025-01-CIRCBIO-08: Bioprospecting and optimized production of the terrestrial natural products: new opportunities for bio-based sectors.

The action covers modern biodiscovery approaches including, *in-silico* bioprospecting and the full integration of digital methods (e.g., statistics, algorithms, AI, data science, modelling, digital twins) with bioinformatics and biotechnological tools, which make possible the identification and production of bioactive natural compounds with potential high-value application in sectors such as pharmaceuticals, nutraceuticals, cosmetics, food/feed additives, agrochemicals, etc. In the context of this topic, natural products are understood as biologically active products such as secondary metabolites as well as enzymes derived from marine/aquatic organisms.

Targeted marine/aquatic biological resources can be sourced from their natural environment (in-situ) and/or from open access and public/private collections and gene-banks (ex-situ).

The aim is to broaden the range of novel compounds, lowering the production costs, quicken the development pipeline, and enable more innovation for the industrial operators, with clear-cut benefits for the final users. Projects should have a strong industry drive and include demonstration activities to proof the techno/economic viability of the production of the proposed marine/aquatic natural product(s) and/or the biodiscovery platform tools combining digital and biotechnologies.

The scope covers relevant steps of the biodiscovery process such as isolation and characterization of microbial strains and consortia, genomic characterisation, creation of natural product libraries, bioactivity screening, natural products isolation and purification, chemical structure elucidation or optimized production pathways via biotechnology and

biomanufacturing approaches in suitable industrial facilities (bioreactors/biorefineries, e.g. for microbial production), synthetic biology or gene editing. The integration of digital approaches (AI, computer algorithms such as machine learning, modelling, data science etc) on optimizing the biodiscovery processes such as identification of biosynthetic gene clusters and metabolic pathways, enzyme selection, combinatorial assembly and annotation of high-throughput DNA sequencing data, bioactivity prediction, elucidation of the structure of compounds, experimental design etc is in scope. Safety to the end-users and operators needs to be assessed and guaranteed.

Proposals should avoid overlaps with past or ongoing topics (e.g. projects funded under the topic HORIZON-CL6-2022-CIRCBIO-02-05-two-stage: Life sciences and their convergence with digital technologies for prospecting, understanding and sustainably using biological resources, topic HORIZON-CL6-2023-CIRCBIO-01: Broadening the spectrum of robust enzymes and microbial hosts in industrial biotechnology), consider synergies to parallel actions (e.g. HORIZON-CL6-2025-01-CIRCBIO-08: Bioprospecting and optimized production of the terrestrial natural products: new opportunities for bio-based sectors as well as funded under the topic HORIZON-2020-FNR-11-2020 - Prospecting aquatic and terrestrial natural biological resources for biologically active compounds¹⁸⁵). The action is expected to establish links with relevant projects funded under the EU Mission Restore our Ocean and Waters.

The action needs to guarantee biodiversity preservation. This can be addressed, inter alia, by covering propagation of biological material, including by in vitro cultivation, as well as by biotechnology approaches. The action needs to comply with applicable EU regulations and international rules on access to biological resources, their sustainable use and the fair and equitable sharing of benefits from their utilisation, including the Nagoya protocol, the Kunming-Montreal Global Biodiversity Framework (KM-GBF), and the agreement on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ). A life-cycle assessment should be carried out to evaluate the environmental, economic, and social impact of the developed product(s). Proposals should contribute to the understanding of potential trade-offs inherent in the exploitation of ecosystems, their potential to deliver ecosystem services and ideally provide solution approaches to address these trade-offs. Potential risks to the environment, ecosystems, and society as well as benefits should also be assessed under this topic.

Proposals are encouraged to consider, where relevant, the services offered by European research infrastructures such as EU-OPENSOURCE, ELIXIR, EMBRC ERIC, IBISBA or other relevant research infrastructures¹³⁸.

Safeguarding and sustainably innovating the multiple functions of EU forests

Proposals are invited against the following topic(s):

¹⁸⁵ https://cordis.europa.eu/programme/id/H2020_FNR-11-2020/en

HORIZON-CL6-2025-01-CIRCBIO-15: European partnership: Forests and Forestry for a Sustainable Future

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 70.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 70.00 million.
<i>Type of Action</i>	Programme Co-fund Action
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>The funding rate is 30% of the eligible costs.</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. As financial support provided by the participants to third parties is one of the primary activities of the action in order to be able to achieve its objectives, the EUR 60 000 threshold provided for in Article 207(a) of the Financial Regulation No 2024/2509 does not apply. The maximum amount to be granted to each third party is EUR 10 000 000 for the whole duration of Horizon Europe ¹⁸⁶.</p>
<i>Total indicative budget</i>	The total indicative budget for the topic is EUR 70 million committed in annual installments over years 2025-2027 (EUR 10 million from the 2025 budget, EUR 30 million from the 2026 budget and EUR 30 million from the 2027 budget). The total indicative budget for the duration of the partnership is EUR 70 million.

Expected Outcome: In line with the European Green Deal and its vision for a climate-neutral, prosperous economy by 2050, and the EU forest strategy for 2030, this partnership will mobilise research and innovation to accelerate the transition to a sustainable forest bioeconomy to enhance forest sector value, biodiversity, and climate resilience.

The partnership will deliver knowledge and solutions that will support the implementation of several other European Green Deal strategies and initiatives, notably: the EU's 2050 climate neutrality target, the EU forest strategy for 2030, the EU biodiversity strategy for 2030, the EU bioeconomy strategy, the European industrial strategy, circular economy action plan, the

¹⁸⁶ However, if the objectives of the action would otherwise be impossible or overly difficult (and duly justified in the proposal) the maximum amount may be higher.

Land Use, Land Use Change and Forestry Regulation (LULUCF), the EU Nature Restoration Regulation and the proposal for a Regulation on a forest monitoring framework.

The expected outcomes of the topic will contribute to impacts of various Destinations under Cluster 6 of Horizon Europe, notably Destination ‘Circular economy and bioeconomy sectors’.

The partnership is expected to contribute to all the following expected outcomes:

- a robust European R&I system for forests and forestry, co-created through complementary forest research agendas across the EU Member States and Associated Countries, leading to strengthened collaborations, enhanced understanding of forest ecosystem resilience, and reinforced role of the EU in the international forest agenda;
- strong consistency between social, environmental and economic dimensions of forests and forestry, and improved knowledge of their interplay is established;
- increased knowledge of the functioning and the role of forests in climate action and ecosystems protection and restoration and improved guidelines on innovative and adaptive forestry regimes for different European regions in order to reach climate mitigation and adaptation, biodiversity, and bioeconomy objectives;
- better understanding of the role of forests in achieving climate and biodiversity objectives in times of accelerating climate change. New knowledge and tools for the timely, consistent, and comprehensive monitoring of forest condition, biodiversity, resilience, and productivity;
- new knowledge, methods, and processes to support major transitions (including increased carbon removals and the restoration of forest ecosystems) and innovations in the sustainable forest-based bioeconomy are developed towards higher added value;
- better understanding of the trends and bottlenecks in the new green forestry business models, including carbon farming, ecotourism and payments for environmental services.

Scope: As the main instrument for public organisations in EU Member States and Associated Countries to collaborate in the forest-based sectors, the partnership will facilitate concerted research and innovation actions on Europe's diverse forestry challenges, with the participation of a wide range of stakeholders, thus reducing fragmentation of related R&I.

The partnership should mobilise key partners and stakeholders, including ministries in charge of research, forest-related areas, and environment, funding agencies, research performing organisations, research infrastructures, foresters, industry, NGOs, international networks, etc.

The partnership should align with transnational research and innovation activities, as defined in its Strategic Research and Innovation Agenda (SRIA) and address all the following:

- identify R&I priorities to strengthen alignment of European and national research, development and innovation programmes and to increase their policy relevance;

- develop new knowledge and innovative solutions for a systemic and inclusive approach to forest and forestry challenges, looking for synergies in complementary actions and trade-offs between competing actions;
- reinforce the European collaboration on improving the understanding of resilience of forest ecosystems and forest-based sectors, and their underlying constituents to multiple hazards, driven by ongoing climate change and other human made impacts as a basis for adaptation and mitigation measures;
- strike an optimal balance in a range of forest functions and related societal values, including views of different stakeholders, thus responding to societal expectations while supporting the forest industry in a transition towards a greener and circular bioeconomy;
- focus on the multifunctional role and the sustainable management of forests as well as the interplay between forestry biomes, regimes and the continuous provision of biodiversity and ecosystem services, and resilience to climate change (drought, fire, pests and diseases, compound and cascading risks etc.) as well as climate adaptation;
- consider the cascading use of forest products and higher added value, supporting business and social enterprise development (creating employment and quality job opportunities and diversified revenue for foresters) in rural areas and industrial development in crucial sectors such as sustainable forest-based industries (traditional and emerging branches), construction, transport, and energy;
- stronger focus on the processes that lead to transformations toward sustainability in the forest-based and bioeconomy sector at European level, which will also be key to the forest industry's long-term competitiveness, in Europe and globally;
- ensure forests and forest management monitoring to ultimately anticipate future developments, provide early alerts on disturbances (e.g., pest outbreaks and climate change driven impacts), and assess the impact of forestry practices on forest and forest soil health and conservation and local communities;
- increase and strengthen international cooperation to develop a critical mass in relation to the global challenges faced including climate mitigation and imported deforestation.

The partnership is open to all EU Member States, as well as to Countries Associated to Horizon Europe. Specific action should be taken to integrate Ukraine in the Partnership to strengthen European sustainable forest management. Partners are expected to provide financial and/or in-kind contribution, in line with the level of ambition of the proposed activities. The partnership should be open to include new partners over its lifetime. Its governance should allow for engaging a broad range of stakeholders, together with the full members of the partnership. Guidelines, standards, and legislation in the field should be taken into consideration, to facilitate the marketing of the methods and products developed in the partnership.

The partnership should allocate resources to cooperate with existing projects, initiatives, platforms, science-policy interfaces, and/or institutional processes at European level, and at other levels where relevant to the partnership's goals.

To ensure that all work streams are coherent and complementary, and to leverage knowledge and innovation investment potential, the partnership is expected to foster close cooperation and synergies with the Horizon Mission 'A Soil Deal for Europe', 'Adaptation to Climate Change', and 'Climate-neutral and Smart Cities', with the existing European Partnerships Circular Bio-based Europe Joint Undertaking (CBE JU), Biodiversa+, Water4All, Agroecology, Built4People, Sustainable Food Systems, and with other relevant future partnerships, in particular the project that may follow from the topic "HORIZON-CL6-2024-GOVERNANCE-02-01: European Partnership of Agriculture of Data". Where relevant, creating links and using the information and data of the European Earth observation programme Copernicus are encouraged.

Cooperation with the JRC may be envisaged, in particular for actions related to forest monitoring and forest management.

Proposals should pool the necessary financial resources from the participating national (or regional) research programmes to implement joint calls for transnational proposals resulting in grants to third parties. The partnership will provide financial support to third parties as one of the means to achieve its objectives. To explore the full range of financing options available under Horizon Europe, the general annexes of the main Work Programme setting out the general conditions applicable to calls and topics for grants should be considered.

To achieve the international cooperation objectives, and given the global dimension of forests, collaboration with strategic third country partners with proven added value in the field of forests and forestry is strongly encouraged. In particular, the participation of legal entities from international countries and/or regions, including those not automatically eligible for funding, is encouraged in the transnational co-funded calls and/or in other activities of the partnership. Cooperation with international organisations may be considered.

Applicants are expected to describe in detail how they would carry out this collaborative work in practice.

Efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Re-usable).

This topic should involve the effective contribution of social sciences and humanities disciplines.

In order to enhance the societal impact of the activities, the approach should empower citizens to contribute to the co-design/co-creation/co-assessment of research and innovation agendas/contents/outcomes.

Cross-articulation with data spaces, and notably with the European Open Science Cloud should be foreseen, exploiting synergies and complementarities of the different approaches.

The Commission envisages to include new actions in future work programme(s) to continue providing support to the partnership for the duration of Horizon Europe.

The expected duration of the partnership is seven to ten years.

Enabling a circular economy transition

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-01-CIRCBIO-01-two-stage: Open Topic: Innovative solutions for the sustainable and circular transformation of SMEs

Call: Cluster 6 Call 01 - two stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>

Expected Outcome: In line with the EU 2050 climate neutrality objective, the circular economy action plan (CEAP), zero pollution action plan, the EU biodiversity strategy and the EU industrial strategy, a successful proposal will contribute to the expected impacts of this Destination related to innovative circular and bio-based materials, products, processes and value chains and to innovative business and governance models to reduce resource consumption environmental impact.

Project results are expected to contribute to all of the following expected outcomes:

- SMEs are equipped to overcome key barriers and challenges in the green transition and to implement requirements of relevant EU policies to mitigate climate change, reduce pollution emissions to air, water and soil, to protect, restore biodiversity and sustainably use ecosystem services or to reduce environmental degradation;
- significantly more SMEs are engaged in sustainable business practices and management practices, have improved their environmental performance and offer innovative circular and bio-based materials, products, processes, or services enhancing industrial competitiveness, resilience, and resource independence;
- sustainable circular business practices are taken up and diffused.

Scope: Under this open topic, proposals should address common but also new, upcoming, or unforeseen challenges to the green transition of SMEs through innovative, disruptive and sustainable solutions. Proposals should identify and analyse key barriers for the sustainable and circular transition of SMEs and develop and demonstrate innovative solutions. If they relate to some of the topics covered by Horizon Europe Calls ‘Circular economy and bioeconomy sectors’ 2021-2022 or 2023-2024, the proposals should convincingly explain how they will build on and not duplicate them.

Solutions can be innovative products, processes, services, or also plans and arrangements. These solutions can include but are not limited to the following examples: new business models (e.g. regenerative), collaborative governance and organisational approaches, development of tailored transformation plans, the identification, development and communication of meaningful set of metrics and indicators, environmental management and reporting tools or others. Proposals can also include the use of digital solutions e.g. digital product passports (DPP), Artificial Intelligence (AI) or digital assistants enabled by Generative Artificial Intelligence. Proposals should analyse the required skills and include skill development activities for current and future employees of the SMEs.

Proposals should demonstrate the feasibility (e.g. economic, technical), environmental performance and utility and transferability of the developed and demonstrated solutions, notably to address climate change mitigation, biodiversity or environmental remediation aspects related to the sustainable and circular transformation of SMEs. The demonstrations of the innovative solutions should be done in a large-scale operational environment with strong involvement of SMEs. The first deployment of the solutions and the validation of their utility can be demonstrated at territorial, sectoral or value chain context. Nevertheless, the solution should be transferable, and the proposal should include the effectively replication in other contexts.

Successful proposals should address the requirements of EU policies relevant to the green transformation of SMEs, if suitable also national or regional strategies, and consider demands from business partners, as customers, to advance their related commitments. Proposed solutions should be concrete and user-friendly to lower the administrative burden for SMEs. This includes adopted, and planned legislation such as the Corporate Sustainability Reporting Directive (CSRD), Ecodesign for Sustainable Products Regulation (ESPR), Green Claims

Directive, the Eco-Management and Audit Scheme (EMAS), EU taxonomy, best available techniques standards and technology developments like digital product passports (DPP). Proposals should also include the development of policy recommendations that support the widespread adoption of the validated solution and use of new knowledge in the development and revision of regulatory frameworks.

Successful proposal should build on the publicly available achievements and findings of related previous national or EU-funded projects as well as collaborate with existing public organisations, e.g. the Enterprise Europe Network, Innovation Centre for Industrial Transformation and Emissions (INCITE) or the EU pact for skills initiative. It is expected that SMEs or SME associations are participating in the consortia, to ensure applicability and dissemination of the results. The engagement of non-governmental organisations, small-scale initiatives and suitable industry or industry associations is encouraged.

Destination - Clean environment and zero pollution

This destination serves the zero-pollution ambition for a toxic-free environment, as set out in the European Green Deal, towards the 2030 zero pollution targets for air, water and soils. The objectives of the EU's chemicals strategy for sustainability, including the focus on PFAS (the 'forever chemicals'). R&I under this destination will contribute to reach the 2030 targets for pollution reduction, by pursuing the precautionary principle and an effective 'zero pollution hierarchy'¹, prioritising preventive measures.

Proposed activities related to ocean and seas will be aimed at the implementation of the zero-pollution action plan within the scope of the Marine Strategy Framework Directive and the EU water legislation as well as the European Ocean Pact.

The destination will also support the implementation of the revised legislation on industrial emissions and air quality, by promoting innovative monitoring and modelling systems. It will support sustainable solutions to prevent and reduce pollution from agriculture ensuring long-term competitiveness and sustainability of the farming sector within planetary boundaries, and address pollution stemming from food and drink industries, in line with the objectives of the common agricultural policy, the announced future EU Vision for agriculture and food, and the Food 2030 initiative.

The development of innovative solutions and clean technologies in bio-based industrial sectors towards a zero-pollution and clean industrial approach is also in scope of this destination, in line with the industrial carbon management strategy and the European Climate Law, and the upcoming update of the bioeconomy strategy, underpinned by the principles of the circular economy and enabled by innovative approaches, to support the Commission communication "A Competitive Compass for the EU", the announced strategy for European life sciences and the EU biotech act.

R&I initiatives within this destination will contribute to the objectives of the EU biodiversity strategy for 2030 and the Nature Restoration Regulation, by addressing pollution as one of the main drivers of biodiversity loss as well as for the protection of the EU natural capital.

Proposals for topics under this destination should set out a credible pathway to **"achieve a clean environment, ensure water resilience, and enable the transformative change necessary to reduce air, water and soil pollution to levels no longer considered harmful to health and natural ecosystems, while respecting planetary boundaries"**. More specifically, they should contribute to one or several of the following impacts:

- enhanced scientific capacity and innovative solutions for detecting and characterising pollution sources, pathways, distribution, and cumulative impacts, including pollutants of great and emerging concern, assisted by AI domain and improved environmental observation and modelling systems, resulting in cleaner air and healthier ocean, seas, waters and soils;
- safe and sustainable by design bio-based (Commission Recommendation (EU) 2022/2510) solutions are developed for and by the bio-based industries, also through

innovative biotechnology and biomanufacturing techniques, to contribute to climate neutrality and replace harmful chemicals in industrial bio-based processes and products;

- sustainable bio-based and nature-based solutions will be developed and tested to remediate polluted environments;
- food systems adopt the zero pollution ambition, preventing and reducing pollution in water, air, and soil;
- farmers are empowered to make informed management decisions on water, carbon, nutrients and greenhouse gas balances for environmental, social and economic sustainability, preventing and reducing pollution from agriculture.

The expected impacts from actions under Destination 4 will be maximised by the complementarities and synergies with other instruments within Horizon Europe and other programmes, like co-funded partnerships Water security for the planet (Water4All), Sustainable food systems for people, planet and climate, Sustainable Blue Economy, Agroecology and Biodiversa+; and the Horizon Europe Missions ‘A Soil Deal for Europe’, ‘Restore our Ocean and Waters by 2030’ and ‘Climate-Neutral Smart Cities’. Collaboration with the institutionalized partnership Circular Bio-based Europe Joint Undertaking will help industrial bio-based systems to replace harmful processes and substances, while fostering the use of sustainable natural resources.

Complementarities with Destinations 1 and 5 will enhance understanding of ecosystem adaptation and resource management under climate change, while addressing freshwater and groundwater challenges and strengthening water resilience.

To maximise the impacts of R&I under this Destination, international cooperation is encouraged.

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-01-ZEROPOLLUTION-01: Innovative and advanced monitoring and modelling systems for revised air quality policies

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
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Expected Outcome: In the context of the European Green Deal and the zero pollution action plan, a successful proposal will contribute to the impact of this Destination related to enhanced scientific capacity and innovative solutions for detecting and characterising pollution, thus contributing to the zero pollution objective for cleaner air.

Project results are expected to contribute to all the following expected outcomes:

- public authorities and other relevant stakeholders (e.g., researchers, NGOs and patient organisations and providers of care especially to vulnerable groups) have access to better and cost-effective solutions to detect, measure, monitor and assess air pollution, including its sources and impacts, as well as pathways for their integration into operational atmospheric monitoring services and networks;
- enhanced and more rapidly accessible air quality data and information support science-based decision-making, and policy development at local and national levels, ultimately leading to more effective air quality measures aligned with the revised EU air policy, as well as to more efficient use of EU, public and private funding for improving air quality;
- increased public awareness and more accurate information of local air quality issues lead to healthier behaviours of citizens, particularly vulnerable groups and sensitive populations (e.g., during air pollution peak periods), including by supporting better evidence-based access to justice related to negative effects of air pollution.

Scope: The revised Ambient Air Quality Directive (AAQD) complements the European Green Deal and is a key action in the Commission's zero pollution action plan. It seeks to align EU air quality standards more closely with WHO recommendations and to better support national and local authorities in achieving cleaner air through strengthening air quality monitoring and modelling and improving air quality plans. For these objectives, several challenges will need to be overcome in the coming years, particularly when it comes to the improvement of accuracy, comparability and real-time nature of monitoring and modelling to assess air quality in Member States and Associated Countries referring to already regulated air pollutants facing stricter limit values (main pollutants include PM₁₀, PM_{2.5}, NO₂, SO₂, benzene, and O₃) and to air pollutants of emerging concern (such as ultra-fine particles – including nano-particles of all kinds, black carbon, volatile organic compounds, ammonia, oxidative potential for particulate matter) and their source apportionment. The proposals are expected to:

- develop or improve cost-effective monitoring and modelling tools, approaches and methods for different types of well-known and emerging air pollutants and pollution sources, addressing the most urgent needs in measurement accuracy (including temporal aspects such as real-time monitoring and modelling) and dispersion mapping, in support of the implementation of the revised AAQD;
- develop methodologies and recommendations for designing optimal monitoring networks, considering relevant aspects of different spatial locations (hotspots as well as urban and rural background locations), combining traditional reference measurements and innovative measurement techniques, including Artificial Intelligence (AI) and the use of innovative low-cost sensors. Recommendations should consider also funding challenges and opportunities;
- improve the processing and integration of in situ, ground-based remote sensing and satellite (e.g. Sentinels) observations, and air quality numerical models utilising various methods, like for example AI algorithms and finite elements modelling.

Where relevant, activities should build and expand on the results of past and ongoing research projects and initiatives with a relevant air quality monitoring and/or modelling component to share experiences, reach synergies and avoid duplication. These could include, but are not limited to, Horizon 2020 and Horizon Europe projects (potentially those funded under HORIZON-CL6-2024-GOVERNANCE-01-6), research infrastructures (for example, ACTRIS ERIC), as well as relevant LIFE integrated projects for clean air. Proposed activities should, where possible, build on results of and cooperate with AQUILA and FAIRMODE¹⁸⁷ communities. Furthermore, this topic is part of a coordination initiative between ESA and the European Commission on Earth System Science. The proposals should articulate how they will coordinate with current and future actions funded by ESA's Future EO programme within ESA atmospheric science cluster.

The integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

HORIZON-CL6-2025-01-ZEROPOLLUTION-02: Environmental impacts from the production of agricultural crops for bio-based industrial systems

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

¹⁸⁷ <https://fairmode.jrc.ec.europa.eu/>

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁸⁸.</p>

Expected Outcome: In line with the industrial carbon management strategy, successful proposals will support the deployment of safe and sustainable by design bio-based solutions, including the supply of sustainable biogenic carbon, thus contributing to the zero pollution objectives.

Project results are expected to contribute to all the following expected outcomes:

- bio-based industries and stakeholders along the supply chain improve their knowledge of the environmental impacts on air/water/soil quality, biodiversity and climate from the production of primary biological resources for industrial bio-based systems;
- public authorities, farmers, advisors and economic actors in the bio-based industrial value chains have access to best practices to produce crops for industrial uses sustainably.

Scope: The assessment of environmental sustainability of biological resources production and trades in the bio-based industrial systems is still a challenge. There is a lack of information and environmental assessment, including the indirect land use change (ILUC) effects and possible impacts on the ecosystems, related to primary biomass grown for bio-based value chains. Industrial bio-based systems within the scope of this topic include those for the production of bio-based chemicals/materials/products excluding food/feed, biofuels/bioenergy. The scope of the topic focusses on the environmental impacts from biomass production, not covering the full life cycle of the uses of such biomass, nor the valorisation of waste and residues.

Proposals should:

- identify the types of primary agricultural crops currently produced for bio-based products within the scope of this topic at EU and Associated Countries scale;

¹⁸⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- include a task for the project to collect data and figures on volumes and geographical distribution of the identified primary agricultural crops traded within the EU and Associated Countries, and from outside the EU towards the EU and Associated Countries. In the cases of primary agricultural crops grown in the EU and Associated Countries, collect data on type of land used and of pedo-climatic zones, cultivation systems and agronomic practices (crop diversification, intercropping, cultivation of catch-crops, etc);
- analyse the environmental impacts of the identified primary agricultural crops produced for industrial purposes and identified under the first bullet of this scope. The analysis should be based on literature data and potentially applying Environmental Footprint methods as described in Recommendation (EU) 2021/2279;
- include a task for the project to assess quantitatively such environmental impacts and trade-offs addressing, but not limiting to, the following environmental categories: i) GHG emissions/savings and carbon footprint, including temporary carbon removals; ii) emissions to air/water/soil from nitrogen and phosphorous based fertilisers; iii) land use and land use change and its related impact on land carbon sink capacity; iv) water use; v) biodiversity and ecosystem services; vi) energy consumption, vii) any other aspects of air/water/soil environmental quality. The quantitative assessment should consider the range of climatic and land conditions, for each primary agricultural crop, due to the geographical distribution. It should be based on data from literature and stakeholders' consultations and potentially applying Environmental Footprint methods as described in Recommendation (EU) 2021/2279. Based on such assessment, individuate best practices and the means to share them among concerned stakeholders.

Proposals should include a task dedicated to sharing methodologies and findings with similar recent or ongoing projects, e.g., MIDAS and MarginUp funded under the topic HORIZON-CL6-2022-CIRCBIO-01-02-Marginal lands and climate-resilient and biodiversity-friendly crops for sustainable industrial feedstocks and related value chains.

Multi-actor approach and international cooperation, especially with Latin–America and the Caribbean, are encouraged.

HORIZON-CL6-2025-01-ZEROPOLLUTION-03: Environmental biotechnology applications in service of remediation of polluted ecosystems

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁸⁹ .

Expected Outcome: In line with the zero pollution action plan, successful proposals will address the remediation of polluted ecosystems through bio-based and nature-based solutions and ecosystem-based adaptation to climate change, in accordance with the European Climate Law.

Project results are expected to contribute to all the following expected outcomes:

- engage public authorities, scientists and operators in the protection and restoration of ecosystems through bio-based and nature-based solutions;
- integrate in local, regional and national plans and strategies for ecosystems restoration, bio-based and nature-based solutions able to remediate degraded soil, sediment, surface water and groundwater affected by pollutants and threats such as salinization, and improve their resilience to climate change and/or their capacity to reduce greenhouse gases emissions/increase carbon removals;
- take advantage of innovative tools enabled by digital innovation, including AI, for the remediation of pollution in emergency conditions.

Scope: Degradation of soil, sediment and water due to anthropogenic causes may result from continuous exposure to pollution and/or unsustainable exploitation, but also from sudden accidents. Degradation may be exacerbated by negative effects of climate change or other

¹⁸⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

threats (e.g., heat waves, fires, floods and landslides, soil/coastal erosion, ocean acidification, etc.). Moreover, in case both the exposure of soil, sediment and water to degrading factors and their vulnerability are high, whereas their resilience is low, the degradation may take the dimension of a disaster. The scope of this topic is the remediation of contaminated soil, sediment and water from pollutants, such as hazardous chemicals, pharmaceutical and waste, including litter and plastics, and their further restoration, including in case of accidents and disasters driven by anthropogenic activities and extreme climate and environmental events. The results from projects funded under this topic will contribute to one of the restoration measures included in the Nature Restoration Regulation to (Annex VII, point (32) *Stop, reduce or remediate pollution from pharmaceuticals, hazardous chemicals, urban and industrial wastewater, and other waste including litter and plastics as well as light in all ecosystems*). Project results will also help Member States to implement national adaptation strategies that promote nature-based solutions and ecosystem-based adaptation to climate change, in accordance with the European Climate Law.

Proposals should:

- select and analyse a set of case-studies of degraded soil, sediment and water affected by pollution and contaminants in the EU and Associated Countries. This could include cases where the degradation is exacerbated by climate change or biodiversity loss or other natural events or anthropogenic forcings;
- include a task in the project to develop bio-based solutions for the environmental remediation of the degraded soil, sediment and water in the selected case-studies, driven by biotechnology applications, and the integration of such bio-based solutions with nature-based solutions. The task should include the assessment of the alignment with the precautionary principle, environmental sustainability and efficiency of the developed solutions in remediating soil, sediment and water, also addressing biodiversity loss and the functional state of the ecosystems. Moreover, it should evaluate the improvement of resilience to the impacts of climate change on the affected ecosystems, due to the applications of the developed solutions;
- include a task in the project on the development of models enabled by digital innovation, including based on artificial intelligence, for the optimization of remediation approaches, also in case of emergency facing disaster and extreme climate and environmental events like fires, droughts, floods, etc.;
- identify and assess the economic, social and safety risks and benefits of the remediation activities in the selected case-studies, in particular in terms of circular economy and of the reduction of the risks for human health resulting from exposure to the contaminants (e.g., vulnerable populations, integrating the gender dimension). The risk reduction should take into consideration the bioavailability and mobility of the contaminants, including heavy metals, other metals (e.g., the ones used in electronic devices, Li, REE, etc.), plastics and organic chemicals (i.e., PFAS, PAHs, pesticides, etc.);

- include a task in the project to deliver the overall environmental, economic, social and safety risk assessment for the developed integrated bio-based and nature-based solutions.

Proposals should include a task dedicated to sharing methodologies and findings with all projects funded under this topic and with similar recent or ongoing projects, e.g., those funded under the topic HORIZON-CL6-2021-ZEROPOLLUTION-01-10: Environmental services: improved bioremediation and revitalization strategies for soil, sediments and water, or under the topic HORIZON-CL6-2023-ZEROPOLLUTION-01-6: Biosensors and user-friendly diagnostic tools for environmental services.

Integrating Citizen Science in research approach is encouraged to contribute to the selection and analysis of case-studies of degraded ecosystems. This topic requires the effective contribution of SSH disciplines, including citizen social science approach and gender studies, especially for the risk assessment on human health. Multi-actor approach and international cooperation are encouraged.

The JRC may contribute with its expertise related to chemical pollutants in the environment and bio-based approaches, as well as to the interface between the research activities and regulatory aspects.

HORIZON-CL6-2025-01-ZEROPOLLUTION-04: Towards a comprehensive European strategy to assess and monitor aquatic litter including plastic and microplastic pollution

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ¹⁹⁰ .
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Expected Outcome: In line with the European Green Deal, notably the EU zero pollution action plan, a successful proposal will contribute to the impacts of this Destination related to addressing pollution for a healthier ocean, seas and waters.

Project results are expected to contribute to all of the following expected outcomes:

- harmonised and coordinated approaches across the EU for monitoring aquatic litter in European freshwater and marine environments;
- improved knowledge and FAIR data enabling a comprehensive assessment of litter sources, pathways, degradation, spatial distribution including on the seabed and sediment, hotspots and areas of accumulation as well as the resulting risks for aquatic biodiversity at EU scale and at basin level;
- implementation of optimised, validated, harmonised, cost-effective, and pan-European monitoring strategies for freshwater, coastal and marine environments, which are taken up by relevant environmental authorities in the EU;
- strengthened cooperation between scientific institutions and relevant environmental authorities responsible for monitoring pollution in freshwater and marine environments at EU and national level, fostering competence in monitoring aquatic litter in the EU;
- implementation of related EU policies, in particular baselines, threshold-setting and identification of changes in levels of plastic litter and microplastics in freshwaters as well as all coastal and marine compartments under the MSFD.

Scope: The monitoring and assessment of litter including plastic, microplastic and nanoplastic pollution in Europe's marine and freshwater environment remains fragmented and diverse, although progress has been made under the Marine Strategy Framework Directive (MSFD) for monitoring quantities and impacts of marine litter and harmonised guidance for monitoring has been produced¹⁹¹. However, large discrepancies between countries, marine regions, litter types and environmental compartments can still be observed and large data and knowledge gaps persist on the sources, pathways, distribution and concentrations of litter in marine and freshwater, which are impeding comprehensive assessments of the extent of litter pollution including microplastics in EU waters. Different approaches for assessing and monitoring litter pollution in freshwater and marine environments are further hindering such assessments.

¹⁹⁰ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁹¹ [JRC Publications Repository - Guidance on the monitoring of marine litter in European seas \(europa.eu\)](#).

Despite the large amount of literature and recent scientific advancements to develop reliable and harmonised analytical research methodologies, guidance, protocols and reference materials, pan-European approaches and strategies that set out what to measure, where to measure, when to measure and how to measure are missing.

Actions should in particular inform monitoring and assessments, including threshold setting, under the Marine Strategy Framework Directive and more broadly support its implementation, the implementation of the Water Framework Directive, the zero pollution action plan, the evaluation and possible revision of the Single Use Plastics Directive as well as EU initiatives on microplastics (such as under REACH and reduction of plastic pellets releases). Actions will also contribute to the planned Global Agreement to End Plastic Pollution and the UN Decade of Ocean Science for Sustainable Development.

Proposals should demonstrate how they will contribute significantly at EU level to all of the following:

- enhance data acquisition, quality assurance and quality control approaches, and effective use of available data from source-to-sea including lake, riverine, groundwater, coastline, sea surface and seabed monitoring of (plastic) litter including (different types of) microplastics, making use of diverse data sources (incl. data collected by citizen science initiatives) and new technologies to improve quantitative knowledge on pollution sources, pathways, spatial distribution and accumulation zones, including on the seabed, leakage and transport at EU scale and at basin level;
- develop scientific approaches as well as environmentally relevant reference materials and matrices needed to design harmonised methods for detecting, identifying, classifying, and quantifying plastic and microplastic pollution in realistic conditions, which will enable a comprehensive assessment of the exposure of aquatic biodiversity to litter;
- improve tools and methodologies for efficient and where possible autonomous sampling, developing rapid and reliable analytical methods and imaging techniques for seabed macro litter and monitoring of microplastic pollution to address policy needs;
- develop analytical methods for detecting, characterising and monitoring nanoplastic particles in aquatic environments;
- develop, improve and implement fit-for-purpose, optimised, validated, harmonised and cost-effective monitoring strategies for freshwater, coastal and marine environments and collaborative data collection across borders, which need to be implemented on a sufficient scale to assess the problem;
- enable the uptake of monitoring data in large scale databases (e.g. the European Marine Observation and Data Network (EMODnet) and the European Digital Twin of the Ocean) following FAIR principles, to ensure public data accessibility and use and foster a comprehensive assessments of litter pollution at European level.

The action is expected to build on the work and engage with the Technical Group on Marine Litter under the Marine Strategy Framework Directive, which is co-led by the JRC. It should build on the outcomes and establish links with relevant projects, including projects funded under the EU Mission Restore our Ocean and Waters and its Mediterranean lighthouse (e.g. the projects PlasticPirates – Go Europe!¹⁹², UPSTREAM¹⁹³, INSPIRE¹⁹⁴ and topic HORIZON-MISS-2025-03-OCEAN-02: A toolbox for public authorities to address marine plastics and litter from river-to-ocean), the EUROqCHARM¹⁹⁵ project and JPI Oceans microplastics projects.

The action should also contribute to regional and global efforts on monitoring plastic pollution in the ocean and waters, by building links with activities of relevant regional seas conventions, the International Council for the Exploration of the Sea (ICES) and contributing to the UN Decade of Ocean Science for Sustainable Development. Proposals should also build on and contribute to the GEO Blue Planet initiative and the Integrated Marine Debris Observing System (IMDOS) in cooperation with GOOS and UNEP. Proposals are encouraged to liaise with and consider the services offered by, where relevant, European research infrastructures¹⁹⁶.

International cooperation is encouraged, including with All-Atlantic Ocean Research and Innovation Alliance partner countries. This topic is part of a coordination initiative between ESA and the European Commission on Earth System Science. The EC-ESA Earth System Science Initiative enables EC and ESA to support complementary collaborative projects funded on the EC side through Horizon Europe and on the ESA side through the FutureEO programme.

HORIZON-CL6-2025-01-ZEROPOLLUTION-05: EU-India cooperation on cumulative impacts of marine pollution on marine organisms and ecosystems

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions

¹⁹² <https://cordis.europa.eu/project/id/101088822>

¹⁹³ <https://cordis.europa.eu/project/id/101112877>

¹⁹⁴ <https://cordis.europa.eu/project/id/101112879>

¹⁹⁵ <https://cordis.europa.eu/project/id/101003805>

¹⁹⁶ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Due to the scope of this topic, consortia must include as associated partner(s) at least one legal entity established in India; Legal entities established in India can only participate as associated partners.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).¹⁹⁷.</p>

Expected Outcome: In line with the European Green Deal, notably the EU zero pollution action plan, a successful proposal will contribute to the impacts of this Destination related to addressing pollution for a healthier ocean, seas and waters.

Project results are expected to contribute to all of the following expected outcomes:

- improved scientific understanding of the interplay of different pollutants, their ‘cocktail effect’ and degradation pathways, on marine organisms and ecosystems;
- improved understanding of the risks and cumulative impacts of different forms of pollutants for the health of marine organisms and ecosystems and ultimately human health;
- policy-makers gain a better understanding of the interplay of the triple planetary crises of climate change, biodiversity loss and pollution on marine life;
- reinforced cooperation between EU and Indian research and innovation communities on marine litter and its effects, including cumulative effects with other forms of pollution.

Scope: Marine pollutants cause harmful effects on marine species and wildlife, serious negative impacts on the structure and functioning of ecosystems, the goods and services they provide, and ultimately on human health, wellbeing and prosperity.

While there have been significant advances in understanding the effects of individual pollutants on marine life, the cumulative effects of different marine pollutants, including persistent organic pollutants (POPs), pharmaceuticals, per- and polyfluoroalkyl substances (PFAS), heavy metals and trace elements, micro- and nano plastics, nanomaterials,

¹⁹⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

biodegradable products, microbiological contaminants, pesticides, fertilisers and nutrients, and the associated risks for marine life are not fully understood. The interplay of climate change (and the resulting effects of a warming and more acidic ocean) with pollutants including actual and predicted changes in their bioavailability, toxicity and water quality, need to be further examined including (gender-specific) implications for human health following a ‘One-Health’¹⁹⁸ approach.

R&I in this area is therefore expected to support the implementation of the Marine Strategy Framework Directive, in particular the assessments of the adverse effects of pollutants, including cumulative effects, on the health of species and habitats in line with Commission Decision (EU) 2017/848, the Water Framework Directive, the zero pollution action plan, the objectives of protecting and restoring ecosystems of the EU biodiversity strategy for 2030 and of the EU Nature Restoration Regulation, the evaluation and possible revision of the Single Use Plastics Directive, the planned Global Agreement to End Plastic Pollution and contribute to the UN Decade of Ocean Science for Sustainable Development.

Marine litter and marine plastic pollution is a particularly pervasive global problem, with particularly high concentrations observed in European seas as well in Southeast Asia. R&I in this area have thus been identified as a priority by the EU-India Trade and Technology Council’s Working Group on Green and Clean Energy Technology to reinforce bilateral cooperation.

Proposals should demonstrate how they will contribute significantly to:

- develop new analytical tools, methods and sensors for the screening, detection, identification and monitoring of different pollutants in the marine environment such as persistent organic pollutants (POPs), pharmaceuticals, per- and polyfluoroalkyl substances (PFAS), heavy metals and micro- and nano plastics including their degradation products, microbiological contaminants, pesticides, fertilisers and nutrients;
- advance assessments of the risks in real conditions, accumulation, exposure (incl. low-level) and ecotoxicological effects (e.g., on endocrine systems, fertility, metabolism, neurological development and behaviour, growth as well as genetic and physiological changes) of these pollutants on marine organisms and (vulnerable) populations including seabed habitats, benthic communities, endangered species and species for human consumption, incl. risks associated with effects such as harmful algal blooms;
- analyse the cumulative impacts of a combination of different pollutants (‘cocktail effect’), their degradation pathways in ecosystems and organisms, and their interplay with climate change such as changes in bioavailability, toxicity and water quality on marine organisms and populations;
- assess bioaccumulation and biomagnification processes of pollutants in the marine food chain including in seafood and implications for human health including and variations in effects on e.g., different sexes or age groups.

¹⁹⁸ [One Health - European Commission \(europa.eu\)](https://european-council.europa.eu/media/en/press-communications/infographic/Pages/infographic-one-health-2021-01-27.aspx)

Proposals should build on the outcomes and establish links with relevant projects, including those funded under the EU Mission Restore our Ocean and Waters and its Mediterranean lighthouse, and the topic HORIZON-CL6-2025-02-CLIMATE-02: The ocean-climate-biodiversity-people nexus: uncovering safe operating space for safeguarding the integrity and health of the global ocean and relevant JPI Oceans projects. Proposals are encouraged to liaise with and consider the services offered by, where relevant, European research infrastructures¹⁹⁹.

This topic is within the scope of the EU-India Strategic Partnership and the EU-India Trade and Technology Council in relation to marine litter. For the purposes of this topic, the Ministry of Earth Sciences of the Government of India has made the required co-funding available for associated partners in selected projects.

HORIZON-CL6-2025-01-ZEROPOLLUTION-06: Provide digital solutions tailored to small and medium-sized farms to monitor and sustainably manage agricultural inputs and natural resources

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B.
<i>Legal and financial</i>	The rules are described in General Annex G. The following

¹⁹⁹ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

<i>set-up of the Grant Agreements</i>	<p>exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000²⁰⁰.</p>
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Expected Outcome: In line with the common agricultural policy objectives, the European Green Deal and the headline ambitions of a digital age and economy that work for people, leaving no one behind, more specifically the zero pollution action plan for air, water and soil, the EU biodiversity strategy for 2030, the Climate Law and the climate adaptation strategy, the successful proposal will improve the capacities of small- and medium-sized farms to manage agricultural inputs and natural resources through the uptake of tailored digital tools making use of data technologies, including generative AI. In that way, the proposal should encourage farming systems to prevent and reduce pollution in water, air and soil, increase the use efficiency of natural resources, reduce the impact of climate change, and empower farmers to take informed decisions on agricultural inputs and natural resources for environmental and economic sustainability, as described for this destination.

Project results are expected to contribute to all of the following expected outcomes:

- small- and medium-sized farmers are empowered with innovative digital and data-driven solutions tailored to their specific needs, allowing for the sustainable management of water, nutrients, other inputs and natural resources in conventional and other types of agriculture, including organic farming systems;
- the digital divide between farms with differing capacities and characteristics is reduced.

Scope: A key challenge for the agricultural sector is to provide food in a context of increasing global population, climate change and price volatility while reducing pollution and preserving natural resources and biodiversity for future generations. Farmers should be able to adopt innovative solutions to increase the efficiency and competitiveness of the farming sector while lowering its environmental footprint. However, still many farmers, particularly small- and medium-sized ones, do not have easy access to monitoring and decision support systems and tools fed with data reflecting local conditions and farm characteristics.

Digital and data technologies offer solutions to monitor environmental parameters (e.g. soil conditions, water and air quality, nutrients content and availability) in a cost-efficient manner while supporting decision-making of natural resources and inputs management.

Proposals should:

- critically analyse the potential and limitations of R&I results from relevant past and ongoing projects, and the requirements of further development to meet farmers' needs

²⁰⁰ However, if the objectives of the action would otherwise be impossible or overly difficult (and duly justified in the proposal) the maximum amount may be higher

(including a cost-benefit analysis), made available to industrial partners (including SMEs) that provide technological solutions to farmers to monitor and manage natural resources and agricultural inputs. This should be in the form of a structured catalogue of these results relevant to the topic such as new sensors, software, databases, applications, methodologies, algorithms, etc. (non-exhaustive list), and covering different farming systems/approaches, including organic farming;

- identify barriers and enablers for translation of R&I results into practical and commercial tools for small- and medium-sized farmers, and for the uptake by these end-users, as well as characterise remaining knowledge, training and/or advice gaps, and needs for policy feedback;
- design and set up an accessible and searchable web-based database with technical descriptions and relevant information of all the available results from the catalogue in a structured way, making concrete efforts to follow the FAIR principles;
- set up a central brokerage and support service point aimed at matching innovation ideas from industrial partners that want to improve or create new products or services with the needs of small- and medium-sized farmers. These developments include, for example, increasing the number of measured parameters on existing devices, improving precision, automation, integration of systems and decision-making tools considering the diverse pedo-climatic, cropping and social conditions across the EU and Associated Countries while checking also the transferability to other regions with similar characteristics. The service should be free of charge for the industrial partners;
- establish a network of research and innovation providers and intermediaries with capacity to support the industrial partners to identify and develop the newly adapted solutions;
- provide innovations based on digital and data-based solutions (e.g. IoT, remote sensing, sensors, (generative) artificial intelligence, data visualization techniques) and tailored to the needs of small- and medium-sized farmers, carefully considering the specific barriers and enablers for adoption in each context (e.g. skills of end users, access to and understanding of digital tools, availability of local data, investment need, connectivity, gender role perceptions and expectations, diverse pedo-climatic and socio-economic conditions across the EU and Associated Countries, etc.) and proposing how to overcome these difficulties and foster the enablers;
- develop prototypes of the innovations and test them in an operational environment;
- set up a community of practice to facilitate science-business exchanges and to share experiences across the EU and Associated Countries. Complementarities with European and national AKIS knowledge channels or similar should be explored;
- propose a clear strategy to disseminate and exploit results, innovations and best practices during and beyond the project lifetime;

- monitor progress of the different innovations delivered by the supported third parties, taking stock of good practices and contribution to the achievement of the objectives of the topic.

Proposals should implement the multi-actor approach, involving at least scientists, private companies, innovators, advisors and farmers to ensure a functional and effective product which is tailored to the farmers' needs.

Proposals should provide financial support to third parties to help private partners to develop those innovative products primarily building on the technologies identified in the catalogue. It is expected that minimum 50% and maximum 65% of the EU funding should be allocated to this purpose. Consortia need to define a selection process for the industrial partners for which financial support may be granted. The provision of training (including technical guidelines and ad-hoc materials) and support services to farmers and advisers should be considered as a criterion to grant financial support to these third parties.

This topic should involve the effective contribution of social sciences and humanities (SSH) disciplines, especially in the field of behavioural sciences and adoption of technologies.

HORIZON-CL6-2025-01-ZEROPOLLUTION-07: Reducing pollution from the food and drink industries

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: The proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: In line with the European Green Deal priorities, the zero pollution action plan, chemical strategy for sustainability, farm to fork strategy for a fair, healthy and environment-friendly food system, the biodiversity strategy for 2030, notably its objective of

reducing pollution, and the EU's climate ambition for 2030 and 2050, the successful proposal will support R&I to reduce pollution coming from food systems (and eventually stop it). This will contribute to the transformation of food systems to deliver co-benefits for climate (mitigation and adaptation), biodiversity, environmental sustainability and circularity, sustainable healthy nutrition and safe food, food poverty reduction, empowerment of communities, and thriving businesses.

Project results are expected to contribute to all of the following expected outcomes:

- better understanding of the pollution coming from the food and drink industry;
- all food and drink industries have methods at their disposal to measure their pollutants emissions and to reduce them from the source;
- contribution to the food 2030 priorities: nutrition for sustainable healthy diets, climate, biodiversity and environment, circularity and resource efficiency, innovation and empowering communities.

Scope: Food systems, on the one hand, are a source of pollution and, on the other hand, suffer from the consequences of pollution. Moving towards zero pollution food systems can therefore contribute to building the resilience of food systems and the natural ecosystems on which they depend. Contaminants have been accumulating in food products, whether due to food being in contact with specific materials at various stages of the food supply chain, such as food processing plants, packaging, or in agriculture with contaminated soils, air and water.

In the context of the Industrial and Livestock Rearing Emissions Directive and the relevant Best Available Techniques (BAT) conclusions for the food, drink and milk industries, some data are already available. However, there are currently several knowledge gaps when it comes to emerging and/or less known pollutants, and their cocktail effects on the environment and human health.

Some activities of the food and drink industries can lead to soil, water and air pollution, which can, in turn, adversely affect food safety, biodiversity and human health. This pollution can take many forms: plastics (including micro- and nano-plastics), food packaging, persistent chemicals, light, noise, odour, etc. There are significant regional differences in the impact of environmental pollution, depending on the type of pollutant. While European and national strategies remain important to reducing pollution, international cooperation is key to ensure that efficient and impactful measures are put in place to protect our oceans and inland waters, ecosystems, biodiversity and health.

The proposals are expected to:

- focus on food and drink industries' processes and on pollutants (including emerging pollutants) typically coming from these industries;
- develop analytical methods, e.g. using the Environmental Footprint method, to measure pollutants and studying/mapping the pollutants coming from food and drink industries

that are not covered in the Best Available Techniques (BAT) conclusions for the food, drink and milk industries and how they interact with each other (mixture of pollutants);

- propose monitoring/tracking methods for pollutants coming from food and drink industries, focusing on less-known and emerging pollutants specific for food and drink industries and taking into account the diversity of these industries;
- identify the most effective methods/best available technologies to reduce food-system-related pollution (in soil, water and air) from food and drink industries, focusing on the most relevant/prominent pollutants (the ultimate objective being to eventually stop pollution);
- develop activities for empowering consumers (e.g. communication, awareness raising);
- develop activities for ensuring adequate involvement of researchers, national agencies/authorities and laboratories, as well as food and drink industry (incl. strategic innovation platforms and federations).

This topic contributes to the European Green Deal priorities, the zero pollution action plan, chemical strategy for sustainability, farm to fork strategy for a fair, healthy and environment-friendly food system, the biodiversity strategy for 2030, notably its objective of reducing pollution, and the EU's climate ambition for 2030 and 2050. The successful proposal will contribute to the transformation of food systems to deliver co-benefits for climate (mitigation and adaptation), biodiversity, environmental sustainability and circularity, sustainable healthy nutrition and safe food, food poverty reduction, empowerment of communities, and thriving businesses.

For any activities on depollution to achieve zero pollution in large industrial installations and contribute to the climate ambition, please refer to the Innovation Centre for Industrial Transformation and Emissions (INCITE) (<https://innovation-centre-for-industrial-transformation.ec.europa.eu/>).

Proposals must implement the multi-actor approach by involving a wide range of food system actors and conducting multi-disciplinary research (including on environmental science and biodiversity). International cooperation is strongly encouraged.

Where relevant, activities should build and expand on the results of past and ongoing research projects. Projects should have a clear plan as to how they will collaborate with other projects selected under this topic and any other relevant topic or relevant EU partnerships. They should participate in joint activities, workshops, focus groups or social labs, and common communication and dissemination activities, and show potential for upscaling. Applicants should plan the necessary budget to cover these activities.

HORIZON-CL6-2025-01-ZEROPOLLUTION-01-two-stage: Substances of concern and emerging pollutants from bio-based industries and products: mapping and replacement

Call: Cluster 6 Call 01 - two stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>

Expected Outcome: In line with the chemical strategy for sustainability and the revision of the Industrial Emissions Directive, successful proposals will support the deployment of safe and sustainable by design bio-based industries and products, contributing to the de-fossilization and to the climate neutrality of EU industrial systems in a sustainable way.

Project results are expected to contribute to all of the following expected outcomes:

- stakeholders of bio-based value chains, including in public procurement, researcher centres, industries, public administrations, final consumers, etc., gain awareness on the releases of hazardous substances, emerging pollutants and substances which are persistent and liable to bio-accumulate in ecosystems from bio-based industrial processes and from bio-based products;
- bio-based industries operators and customers improve their knowledge and use of safe and sustainable bio-based alternatives replacing hazardous substances, to achieve healthier air, water and soil.

Scope: Preventing hazardous emissions at source is key to reach the 2030 pollution reduction targets, including substances of concern, very high concern and emerging pollutants (e.g., PFAS and endocrine disrupting chemicals) as defined in relevant pieces of legislation (e.g., REACH, ESPR, Batteries regulation). Bio-based innovative solutions, also in line with the recent initiative on biotechnology and biomanufacturing and the industrial carbon management strategy, should be designed to provide the solutions to replace hazardous substances in industrial assets and in final products and materials. Bio-based materials and products within the scope of this topic do not include food/feed, biofuels and bioenergy.

The proposals should:

- track presence of substances of very high concern and of concern, emerging pollutants and substances which are persistent and liable to bio-accumulate in ecosystems emitted from a selection of bio-based materials and products. This includes substances released in all the life phases of bio-based materials and products, during their use and their end-of-life. Evaluate the exposure of targeted end users to the substances, including integrating the gender dimension (sex and gender analysis) and vulnerable groups;
- include a task for the project to perform a full risk assessment of the substances emitted from the selected bio-based materials and products, also assessing the impacts on affected ecosystems and the risk for biodiversity loss;
- track presence of substances of very high concern and of concern, emerging pollutants and substances which are persistent and liable to bio-accumulate in ecosystems, emitted from a selection of industrial bio-based systems;
- include a task for the project to identify and improve a set of bio-based safe and sustainable by design (Commission Recommendation (EU) 2022/25) and circular solutions, to replace hazardous substances and to increase the resources efficiency, both at the level of industrial processes and in final materials and products selected under the first and the third bullet points of this scope. The number of bio-based solutions provided is not pre-defined. The task should include the assessment of the reduction of substances of concern and emerging pollutants, derived from the substitution;
- describe the collection of recommendations and best practices to replace substances of concern with safe and sustainable by design bio-based alternatives.

Proposals should include a task dedicated to sharing methodologies and findings with all projects funded within this topic. Moreover, the projects should collect and analyse the outcomes from past and ongoing projects under EU programmes, including the Circular Bio-based Europe Joint Undertaking, addressing the challenges in the scope of this topic.

For depollution to achieve zero pollution in large industrial installations, please refer to the Innovation Centre for Industrial Transformation and Emissions (INCITE) (<https://innovation-centre-for-industrial-transformation.ec.europa.eu/>).

Citizen Science is encouraged as a research approach for this topic. Citizen science activities should be conducted with the guidance and in close co-operation with researchers. This topic requires the effective contribution of SSH disciplines, including citizen social science and gender studies, especially in the task on risk assessment.

Multi-actor approach and international cooperation are encouraged.

DRAFT

Destination - Land, ocean and water for climate action

R&I under Destination “Land, ocean and water for climate action” will deliver mainly under Key Strategic Orientation (KSO) 1 of Horizon Europe Strategic Plan 2025-2027: Green transition. It will also deliver under KSO 2: Digital Transition and KSO 3: A more resilient, competitive, inclusive and democratic Europe.

This Destination is expected to support the implementation of the European Ocean Pact, foster mitigation of and adaptation to climate change on land, in the ocean and water, and therefore helps Cluster 6 to support the ambition of Europe becoming the first climate-neutral and climate-resilient continent by 2050, in line with the European Green Deal and the new Commission priority on “Sustaining our quality of life: food security, water and nature”. Actions under this Destination will support the implementation of the European Climate Law, the amended Regulation on land use, land use change and forestry (LULUCF) and the amended Effort Sharing Regulation, which establishes binding annual greenhouse gas emission targets for Member States in sectors which include agriculture.

In continuation with the orientations of previous Cluster 6 Work Programmes, and in line with the Horizon Europe Strategic Plan 2025-2027, R&I actions under this Destination for Work Programme 2025 will be aligned with the Communications on sustainable carbon cycles and with the EU 2040 climate target. They will also support the implementation of the proposed Regulation establishing a Union certification framework for carbon removals and will deliver on climate adaptation in line with the EU strategy on adaptation to climate change. R&I activities in the areas of agriculture and forestry under this Destination will contribute to the implementation of the EU methane strategy, the EU forest strategy for 2030 as well as the proposal for an EU Forest Monitoring Law and will be in line with the EU Marine Strategy Framework Directive when they affect the marine environment.

R&I actions under this Destination will encourage international cooperation and help achieve international commitments concerning land, water and ocean, notably the goals of the Paris Agreement on climate change, the Kunming-Montreal Global Biodiversity Framework and the High Seas Treaty (BBNJ). The destination will support the implementation of the European Ocean Pact and the objectives of the joint communication on the EU Arctic policy, by fostering regional and international initiatives.

Strengthening the climate-ocean-cryosphere-polar science nexus will continue to be a priority for the EU, as well as the integrity and resilience of the ocean and polar regions as vulnerable parts of the Earth system. R&I will support and close key knowledge gaps through research that contributes substantially to the implementation of key international treaties and the work of various international bodies, assessments and other initiatives (such as BBNJ, the Intergovernmental Panel on Climate Change (IPCC), World Ocean Assessment (WOA), UNFCCC Ocean-Climate Dialogue, United Nations Decade of Ocean Science for Sustainable Development and the United Nations Decade for Ecosystem Restoration, the potential International/Intergovernmental Panel for Ocean Sustainability (IPOS), the WMO Greenhouse Gas Watch (G3W), and the work of the Arctic Council).

The Destination will also support the water related targets of the European Green Deal and ensure water resilience with a view of reinforcing society's ability to sustainably secure the availability and affordability of clean water despite the current uncertainty on long-term trends and the increased variability of water availability. This requires adapting our water facilities, our water use and water management to changing economic, societal and environmental factors including climate change. R&I will be necessary to ensure in particular that key innovative approaches, solutions and technologies developed by EU funded projects, are successfully and fairly taken up by policy makers, water managers and water consuming economic sectors. The announced European water resilience strategy and European climate adaptation plan will be supported.

Proposals for topics under this destination should set out a credible pathway contributing to **“fostering mitigation of and adaptation to climate change in areas and sectors covered by Cluster 6”**, and more specifically to one or more of the following impacts:

- better understood short-, medium- and long-term ocean health and integrity at different emission scenarios, under the pressure of current and emerging threats, including ocean climate interventions, and the passing of planetary boundaries for ocean acidification;
- medium and longer-term risks and opportunities for agriculture and forestry from climate change, in particular from shifting climatic zones, are better understood and managed at relevant scales within Europe and in the international context, mitigating hazardous changes where possible;
- greenhouse gas emissions in the agriculture, forestry and land-use sectors are further reduced, while monitoring, reporting and verification of the emissions is improved;
- adaptation and mitigation of water systems in the context of climate change are fostered to help build a water resilient society and environment.

To maximise the impacts of R&I under this Destination, a systemic multidisciplinary approach, strong international cooperation as well as the integration of indigenous and local knowledge need to be ensured. Social innovation also needs to be encouraged to involve all stakeholders, with a view to triggering the ownership of new practices and the uptake of solutions.

R&I under the destination will be complementary with activities of the Mission “Adaptation to climate change”, the Mission “Restore our ocean and waters by 2030” (in particular with the establishment of the Digital Twin of the Ocean) and the Mission “A Soil Deal for Europe”. Synergies will also be established with European partnerships (e.g., Sustainable Blue Economy Partnership, Agroecology and the upcoming European Partnership on Agriculture of Data), PRIMA (amended EC proposal extending the duration of the partnership by three years, i.e., 2025-2027), and with Destination Earth and its Digital Twins (Climate Adaptation, Extremes). Synergies and complementarities with Cluster 5 (Climate, Energy and Mobility) on climate science will also be ensured. Digital technologies, such as AI, robotics,

5G, cloud computing as well as Earth Observation, will be exploited in the activities given their enabling role and potential contribution to the objectives of the cluster.

The Destination will ensure a balance in terms of lower and higher Technological Readiness Levels (TRLs). R&I actions will take advantage of, contribute to, coordinate with, and involve relevant Copernicus services.

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-02-CLIMATE-01: The ocean-climate-biodiversity nexus and marine carbon dioxide removal (mCDR)

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>All international organisations are exceptionally eligible for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The evaluation committee will be composed partially by representatives of EU institutions.</p> <p>To ensure a balanced portfolio covering the topic, grants will be awarded to applications not only in order of ranking but at least also to those that are the highest ranked within each of the two options (A, B) set under ‘scope’, provided that the proposals attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions</p>

	under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ²⁰¹ .
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Expected Outcome: In line with the European and global biodiversity and climate objectives, successful proposals should further the European efforts in achieving both climate-neutrality and ocean sustainability by improving the scientific understanding of ocean climate interventions and their short, medium and long term effects, impacts and risks, and developing monitoring and response measures guided by the precautionary principle and supporting decision-making at regional, European and global levels.

Project results are expected to contribute to several of the following expected outcomes:

- advanced knowledge on scientific aspects, environmental, legal, socio-political and governance considerations for Ocean Alkalinity Enhancement (OAE);
- advanced modelling, monitoring and simulation capabilities (including AI methods and tools) needed for the monitoring, reporting and verification of marine carbon dioxide removal (mCDR) and further improved Earth System Models (ESMs), including the Carbon Dioxide Removal Model Intercomparison Project (CDRMIP);
- enabled evidence-based European and global decision-making on mCDR, sustained European leadership in ocean-climate-biodiversity science nexus, and significant contribution to global scientific assessments.

Scope: Environmentally safe, socially acceptable, and economically viable carbon dioxide removal (CDR) is needed to support the realisation of European and worldwide climate policies. There is considerable uncertainty regarding scalability and the short, medium and long-term effectiveness and impacts on marine ecosystems and human health. Mindful of the precautionary approach, legitimate, responsible, multi and trans-disciplinary, transparent, and inclusive scientific research to evaluate mCDR techniques is urgently needed.

The London Protocol also calls for certain activities other than legitimate scientific research to be deferred (LC 45/LP 18²⁰²). The Convention on Biological Diversity (CBD²⁰³) recognizes the importance of biodiversity in the context of climate-related geoengineering. Decision X/33 of the CBD²⁰⁴ emphasizes the need for a cautious approach, specifying that no climate-related geoengineering activities that may affect biodiversity should take place until there is an adequate scientific basis to justify such activities and that small-scale scientific research

201 This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

202 [45th Consultative Meeting of Contracting Parties to the London Convention and the 18th Meeting of Contracting Parties to the London Protocol \(LC 45/LP 18\) \(imo.org\)](#)

203 [Contracting Parties to the London Protocol \(EC](#)
[XI/20. Climate-related geoengineering \(cbd.int\)](#)

204 [Microsoft Word - COP 10 Decision X \(cdrlaw.org\)](#)

studies are allowed if conducted in controlled settings and justified by the need for specific scientific data. The CBD also requests the compilation of scientific information on the impacts of geoengineering on biodiversity and the study of gaps in existing mechanisms.

Whether the ocean has a potential to help achieve the required extent of additional carbon dioxide removal (beyond the ocean sink driven by increasing atmospheric CO₂ concentrations), while maintaining its integrity and health, requires further research.

Among the greatest challenges associated with mCDR technologies is the ability to measure, monitor and verify the amount of additional carbon removed over time, and to assess the environmental effects of the mCDR technology. This is particularly challenging in the ocean environment, an open system with high inertia, globally connected food-webs and high difference in life traits of species in marine life assemblages, for which safety margins need to be considered, and when considering scale up of these technologies would likely require significant additions in hydrodynamically optimum sites, potentially leading to overlaps with repeated, cumulative and/or transboundary exposures and impacts.

Principled ocean CDR research must be precautionary, inclusive, and well-planned, conducted with a view to ensure these technologies are effective, without harming the environment and people. The research conducted under the topic is to be grounded in the Guide to Best Practices in Ocean Alkalinity Enhancement Research²⁰⁵.

The topic is guided by a focus on integrated climate stabilization and biosphere stewardship for the resilience of the entire Earth system. From this perspective, a comprehensive approach to climate and biosphere stewardship is needed, as well as considering all the sustainability dimensions to guide future decisions.

Actions should aim at developing innovative approaches to address only one of the following options:

Option A: Ocean Alkalinity Enhancement (OAE): biogeochemical and physiological responses and impacts on marine ecosystems

The project is expected to:

- elucidate many unknowns that remain about the efficacy, effectiveness, feasibility, covering both technological readiness and lead time until full potential effectiveness, effectiveness to increase net carbon uptake, effectiveness to reduce ocean warming, ocean acidification, scalability, duration of effects, termination effects, Energy Return on Energy Invested (EROEI), environmental and ecological risk (intended, unintended, undesirable consequences at scale), co-benefits, disbenefits, risks, cost effectiveness, externalities, trade-offs, and competing interests, weighing the impact on reducing climate change by OAE against its negative environmental effects, etc. The actions should use a Life Cycle Assessment (LCA) methodology and consider all the

²⁰⁵ Oschlies, A., Stevenson, A., Bach, L. T., Fennel, K., Rickaby, R. E. M., Satterfield, T., Webb, R., and Gattuso, J.-P. (Eds.): Guide to Best Practices in Ocean Alkalinity Enhancement Research, Copernicus Publications, State Planet, 2-oae2023, <https://doi.org/10.5194/sp-2-oae2023>, 2023

sustainability dimensions (in particular SDGs 3, 6, 9, 12, 13, 14, 15, 16 and 17), across different temporal and spatial scales;

- cover the desirability, ethical considerations, social and political considerations and governability from an international perspective, conducting comprehensive and responsible research to inform decision making under climate inertia about OAE and its potential application;
- carry out comprehensive assessment of the Ocean Alkalinity Enhancement (OAE) and its short, medium and long term impacts on ocean biogeochemistry (including acidification), on pelagic, coastal and deep ocean ecosystems, their assemblages and trophic webs, on marine organisms that are not able to concentrate carbon within their cells under conditions of increased alkalinity, potentially strong fluctuations in pH and seawater pCO₂ impacting plankton and microbiome populations dynamics, species competition and assemblages of connected trophic webs, and calcium hydroxide precipitation threatening coral reefs, plants, periphyton and cyanobacteria due to sensitivity to high levels of turbidity, on primary and second production, on seasonal changes in biogeochemistry and plankton dynamics;
- conduct an assessment and evaluation of the rate and severity of the local impacts and compare multiple datasets to deliver a greater holistic understanding of OAE's biological and ecological impacts regionally and globally, on human wellbeing linked to the degree to which the overall changes in primary and secondary production may result in change of species assemblage on which coastal livelihoods depend; the increased accumulation of contaminants within food chains via the release of minerals such as cadmium, nickel, chromium, iron and silicon, with potential implications for human health; the environmental impacts associated with extensive calcium carbonate mining operations, mineral distribution, the energy-intensive oxy-calcination process, dispersion operations, impact on resource scarcity due to high electric consumption, assessment and evaluation of additional resources needed;
- numerical modelling should be used to assess the scale of the consequences under various scenarios, experimental work in-situ like in mesocosms and benthocosms and ex-situ like in large flow through experimental chambers can help to improve parametrization of geo-biochemical processes. Field experiments are out of scope. The action should improve the precision of predictions and inform ESMs, IAMs and the Carbon Dioxide Removal Model Intercomparison Project (CDRMIP);
- advance the knowledge related to cost and challenges of carbon accounting, cost of environmental monitoring and the need to track impacts beyond carbon cycle on marine ecosystems.

Option B: Monitoring the global ocean for safe, verifiable and sustainable potential marine carbon dioxide removal (mCDR)

The project is expected to:

- establish building blocks and capabilities towards realistic, long-term, sustainable, rigorous, standardized monitoring of potential marine carbon dioxide removal and sequestration, including operational system requirements, and cover aspects of detection, attribution and determination;
- advance empirical approaches and new data needed for data-based ocean modelling (vs. numerical simulations) and develop ocean simulation capabilities based on integrated physical, biogeochemical and ecological oceanic components;
- develop the monitoring capability for quantifying the effectiveness and durability of carbon sequestration, especially in the offshore mesopelagic water column, and identify environmental and ecological short-, medium- and long-term impacts (days to 100s of years) on the ocean and marine ecosystems functioning and the ecosystem services they naturally provide (e.g., biological carbon pump), accounting for climate inertia;
- enable monitoring the multiple components of the carbonate system and, especially in coastal zones, at appropriate spatial and temporal resolution, and considering existing monitoring schemes and databases, such as the Copernicus Marine Environment Monitoring Service (CMEMS), Global Ocean Data Analysis Project (GLODAP) or the Surface Ocean CO₂ Atlas (SOCAT);
- utilise enhanced data from observing/modelling to advance scientific knowledge of the ocean-climate-biodiversity nexus and potential impacts of deliberate perturbations (i.e. mCDR). in the ocean, particularly the deep-sea and coastal environments (speed and magnitude of change, thresholds and tipping points), marine ecosystems functioning and the ecosystem services they provide, including carbon and nutrients cycling, climate regulation and fisheries, for future ocean sustainability and decision-making about active climate remediation, trade-offs and policy needs for decision-making under climate inertia.

For both options A&B, the actions funded under this topic should have a strong collaboration mechanism. Proposals should include a dedicated task, appropriate resources, and a plan on how they will collaborate and ensure synergies with relevant activities carried out under other initiatives.

The actions should build on existing observing platforms, e.g. in the context of the Copernicus programme, and strengthen and expand the current capacities in an inter and multidisciplinary and ecosystem-based approach.

The research carried out should also include SSH perspectives and gender, and the research on desirability, benefits and disbenefits should also be done in relation to desirability for whom, benefits and disbenefits for whom, adding a comprehensive justice perspective on the call, including intergenerational aspects. International cooperation is essential.

A strong linkage should be ensured with the activities under the UN Decade of Ocean Science and ongoing Horizon projects, the Copernicus marine service (CMEMS), GOOS, the Ocean

Biogeographic Information System (OBIS), MBON of GEOBON, ICOS, GCOS, and other relevant international Ocean Observing Initiatives. All in-situ data collected should follow INSPIRE principles and be available through open access repositories supported by the European Commission (Copernicus, and EMODnet). Synergies with the Horizon Europe Mission Restore our Ocean and waters is encouraged. The projects outputs may contribute to the European Digital Twin of the Ocean and the Destination Earth initiative and outline specific plans to this effect.

This topic is part of a coordination initiative between ESA and the European Commission on Earth System Science and should towards this end include sufficient means and resources for effective coordination. Projects should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, Copernicus, as well as data from relevant data spaces in the data-driven analyses. Projects could additionally benefit from access to infrastructure and relevant FAIR data by collaborating with projects funded under the topics HORIZON-INFRA-2022-EOSC-01-03: FAIR and open data sharing in support of healthy oceans, seas, coastal and inland waters and HORIZON-INFRA-2024- EOSC-01-01: FAIR and open data sharing in support of the mission adaptation to climate change. Collaboration with the relevant existing European Research Infrastructures such as those prioritised by the European Strategy Forum on Research Infrastructures (ESFRI)²⁰⁶ is encouraged.

HORIZON-CL6-2025-02-CLIMATE-02: The ocean-climate-biodiversity-people nexus: uncovering safe operating space for safeguarding the integrity and health of the global ocean

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 19.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>All international organisations are exceptionally eligible for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of</p>

²⁰⁶ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>.

	Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering the topic, grants will be awarded to applications not only in order of ranking but at least also to those that are the highest ranked within each of the three options (A, B, C) set under ‘scope’, provided that the proposals attain all thresholds.</p>

Expected Outcome: In line with the European and global biodiversity and climate objectives, successful proposals should further the European efforts in achieving both climate-neutrality and ocean sustainability, by improving the scientific understanding of the short-, medium- and long-term ocean health and integrity at different emission scenarios, under the cumulative and cascading pressures of current and emerging threats, including ocean climate interventions, tipping points and passing of planetary boundaries, risks and impacts, speed and magnitude of change in deep-sea biodiversity and response measures guided by the precautionary principle and supporting decision-making at regional, European and global levels.

Project results are expected to contribute to several of the following expected outcomes:

- further improved understanding of the limits to ocean integrity at different emission scenarios; ocean changes and near term (~2030), mid-term (2050–2060) and long-term (after ~2060) climate actions and policy making under climate inertia, guided by the precautionary approach;
- further advanced science regarding ocean existing and emerging threats and the associated risks and impacts for the next 5–10 years; 10-20 ys; 50-100 ys and more; and uncovering possible response measures guided by the precautionary principle;
- improved understanding of trends, variability, drivers, and social and ecological impacts of ocean acidification (as an integral part of a multi-stressor and cascading problem, alongside ocean warming, deoxygenation, eutrophication, stratification, etc.); more harmonised and tailored ocean acidification monitoring (both chemical and biological), modelling, observation, data integration and prediction capabilities and mitigation activities;
- important contributions made to key ocean monitoring indicators, Essential Climate Variables (ECVs from GCOS), Essential Ocean Variables (EOVs from GOOS) in compliance with international programmes (IPCC, WOA, IPBES, CMIP, CLIVAR, Ocean Health Index, UN Decade, ARGO) that support international global assessments and foster the development of a regional approach to ocean climate monitoring and reporting, overcoming current limitations and gaps;
- further improved Earth System Models (ESMs) representing key physical, biogeochemical, and biological processes in the ocean with reduced uncertainty of

climate change projections at regional scales, and reduced biases (i.e., in the WCRP Coupled Model Intercomparison Project (CMIP7) models for ocean and polar regions);

- enabled evidence-based regional, European, and global decision-making on ocean governance; sustained European leadership in ocean-climate-biodiversity science nexus supporting EU programmes; significant contribution to global scientific assessments, such as the IPCC, IPBES and WOA, as well as to the UNFCCC Ocean and Climate Change Dialogue, UN Decade of Ocean Science and UN SDGs 13 and 14.

Scope: Actions should aim at developing innovative approaches to address only one of the following options:

A. Ocean integrity at different emission scenarios: extreme events, slow onset events, cascading and tipping elements and ocean inertia

The project is expected to:

- advance the science on ocean tipping elements at different GHG emission scenarios, lag times, opportunities and impacts at multi-decadal to multi-centennial timeframes, including the risk of irreversible changes in the carbon cycle and the risks under various overshoot pathways;
- advance the science on ocean changes and near term (~2030), mid-term (2050–2060) and long-term (after ~2060) climate actions;
- contribute to integrated prediction systems that combine Earth System, Ecosystem and Social System models; fully Integrated Assessment Models (IAMs) and Earth System Models (ESMs) with Essential Ocean Variables (EOVs) (ocean biochemistry, ecology, and biology); ability and/or sensitivity of global Earth System Models (ESM) to simulate tipping point crossings; integrated prediction systems that combine Earth System, Ecosystem and Social System models;
- elaborate on the policy implications of inertia (climate inertia and its thermal, ocean, ice sheet, carbon cycle feedbacks and marine ecological components) and develop recommendations for European policy making.

B. Ocean integrity and health: current and emerging anthropogenic threats

The project is expected to:

- advance the science of ocean emerging threats - identify emerging threats that are likely to have a significant impact on the health and functioning of the ocean over the next 5–10 years; 10-20 ys; 50-100 ys and more;
- exploratory research into short-, medium- and long-term impacts on ocean health and marine biodiversity arising from existing and emerging anthropogenic threats, such as (the list is purely informative): mining for critical materials, technologically enhanced ocean carbon uptake, ocean climate interventions, emerging marine renewable energy

(wave, tidal, ocean current, offshore wind power, offshore solar energy, ocean floor geothermal energy), new hydrogen economy and leakages, ocean crops, marine engineering and oil drilling, untapped potential of marine collagens and their impacts on marine ecosystems, exploring marine genetic resources, impacts of expanding trade for fish swim bladders on target and non-target species, impacts of fishing for mesopelagic species on the biological ocean carbon pump, colocation of marine activities, floating marine cities, trace-element contamination compounded by the global transition to green technologies, emerging NIS (invasive species) and pathogens, novel and emerging chemical problems, nutrient and pesticide runoff from industrial agriculture, nanomaterials and micro and nanoplastics, potentially toxic effects of new biodegradable materials intended to replace plastics, emerging contaminants of concern, emerging applications of seaweeds, entanglement of marine mammals in mooring lines, cables and anchors, microalgae for biofuels, marine hydrates, seaweeds supply for human consumption and also raw materials for feeds, nutraceuticals and pharmaceuticals;

- support improved risk assessment and management actions that can contribute to mitigate the impacts of these current and emerging stressors and inform public and policymakers to mitigate potentially negative impacts through precautionary principles before those effects become realized.

C. Ocean integrity and health: Ocean Acidification (OA), Planetary Boundaries and SDG14.3.1

Making appropriate use of the Guide to best practices for ocean acidification research and data reporting²⁰⁷, the project is expected to:

- improve our understanding of trends, variability, drivers, and impacts (ecological, ecosystem services and human) of ocean acidification, in a context of multiple ocean stressors;
- better incorporate complex interactions between natural systems (e.g., climate-ocean coupling, shifting food webs), social systems (e.g., anthropogenic activities, marine pollution, overfishing), and their social, economic, and ecological impacts;
- fill gaps in space and time for ocean CO₂ and ancillary physical and biogeochemical observations at the ocean surface and interior to reduce the biases and uncertainties in the variability and trends for air-sea fluxes and inventory changes, particularly for the Arctic and the Southern Ocean;
- improve our understanding of changes in water mass ventilation associated with climate change and variability to gain further insights into future trends in ocean acidification and deoxygenation in the ocean interior;

²⁰⁷ European Commission, Directorate-General for Research and Innovation, Hansson, L., Fabry, V., Gattuso, J. et al., *Guide to best practices for ocean acidification research and data reporting*, Hansson, L.(editor), Fabry, V.(editor), Gattuso, J.(editor), Riebesell, U.(editor), Publications Office, 2010, <https://data.europa.eu/doi/10.2777/58454>

- better understand aerosol pH, including more direct measurements, and the process controlling the lability of iron, phosphorus, and other trace metals in atmospheric deposition, as well as the need for more direct measurements of the atmospheric deposition of these nutrients to the ocean, particularly in remote ocean regions such as the Southern Ocean;
- improve observations for the interplay between carbonate chemistry and a variety of biogeochemical and physical processes to increase the robustness of future assessments of ocean acidification; ensure better harmonised and tailored monitoring and data integration, improved models (both in term of spatial resolution and representation of the biological processes), and further integrate observations and model products;
- identify and monitor indicators of biological/ecosystem responses to ocean acidification coupled to support the assessment of ecosystem risk and consequences, and better inform management strategies at temporal and spatial scales relevant for organisms and their habitats;
- use models, forecasts, and predictions as tools to facilitate management strategies and design decision-support tools for prioritising the development of climate adaptation strategies, develop innovative tools to monitor and mitigate changing ocean chemistry locally, explore the potential opportunities and risks associated with the research findings, aligned with policy governance, including the different spatial-temporal scales that are ecologically and socio-economically relevant and politically applicable, propose actionable innovative solutions and policy recommendations.

For all three options (A, B & C), actions funded under this topic should have a strong collaboration mechanism and should include a dedicated task, appropriate resources, and a plan on how they will collaborate with one another.

The actions should build on existing observing platforms, e.g. in the context of the Copernicus programme, and strengthen and expand the current capacities in an inter and multidisciplinary and ecosystem-based approach. The research carried out should also include SSH perspectives and gender, and the research on desirability, benefits and disbenefits should also be done in relation to desirability for whom, benefits and disbenefits for whom, adding a comprehensive justice perspective on the call, including intergenerational.

International cooperation is encouraged, especially with AAORIA partner countries. A strong linkage should be ensured with the ongoing activities under the UN Decade of Ocean Science, including where relevant the Decade Programme of the Global Ocean Acidification Observing Network GOA-ON.

Actions under this topic will build upon and link with sister Horizon projects, the Copernicus marine service (CMEMS), GOOS, the Ocean Biogeographic Information System (OBIS), MBON of GEOBON, ICOS, GCOS, and other relevant international Ocean Observing Initiatives. All in-situ data collected through actions funded from this call should follow INSPIRE principles and be available through open access repositories supported by the

European Commission (Copernicus, and EMODnet). Synergies with the Horizon Europe Mission Restore our Ocean and waters is encouraged; the projects outputs may contribute to the European Digital Twin of the Ocean and the Destination Earth initiative and outline specific plans to this effect.

This topic is part of a coordination initiative between ESA and the European Commission on Earth System Science and should towards this end include sufficient means and resources for effective coordination. Projects should leverage the data and services available through European Research Infrastructures federated under the European Open Science Cloud, Copernicus, as well as data from relevant data spaces in the data-driven analyses. Projects could additionally benefit from access to infrastructure and relevant FAIR data by collaborating with projects funded under the topics HORIZON-INFRA-2022-EOSC-01-03: FAIR and open data sharing in support of healthy oceans, seas, coastal and inland waters and HORIZON-INFRA-2024- EOSC-01-01: FAIR and open data sharing in support of the mission adaptation to climate change. Collaboration with the relevant existing European Research Infrastructures such as those prioritised by the European Strategy Forum on Research Infrastructures (ESFRI)²⁰⁸ is encouraged.

HORIZON-CL6-2025-02-CLIMATE-03: Understanding and managing medium and longer-term challenges and opportunities for agriculture stemming from shifting climatic zones and changing agroecological environments

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>

²⁰⁸ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>.

<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁰⁹.</p>
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Expected Outcome: In line with the EU adaptation strategy, the common agricultural policy's key objective of contributing to climate change mitigation and adaptation, and the EU biodiversity strategy for 2030, the successful proposals are expected to contribute to better understanding and managing medium and longer-term challenges and opportunities for agriculture stemming from shifting climatic zones and changing agroecological environments.

Project results are expected to contribute to all of the following expected outcomes:

- the complex links between changes in climate conditions, ecosystems and their services, and agriculture productivity and sustainability are better understood and managed by relevant actors in the sector and in policy-making;
- the suitability of agriculture land areas for different agricultural uses is better understood, and regionally specific adaptation strategies are widely applied, taking into account different climate change scenarios;
- farmers and other owners and managers of agricultural land are more knowledgeable and better equipped to address the challenges and seize the opportunities resulting from shifting climatic zones and changing agroecological conditions.

Scope: While average global temperatures have risen by about 1.5° C globally since pre-industrial times, temperatures in Europe – the fastest warming continent – are rising at about twice that speed.²¹⁰ As temperatures rise, previously stable climatic zones (i.e., long-term patterns of temperature, precipitation and their seasonal variations) are shifting towards higher latitudes (towards the poles) and towards higher altitudes (where possible). Arid and semi-arid zones are expanding, while polar and sub-polar zones are shrinking. Precipitation patterns and regimes are also changing across different climatic zones. These changes affect natural as well as managed ecosystems and the services provided by them, altering the distribution and abundance of many plant species and their lifecycles, with consequences for cropping and other forms of agricultural land use, including animal husbandry. Studies show that agro-climatic zones have already moved in the EU over the past 40 years due to climate change,

²⁰⁹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²¹⁰ European Environment Agency, European climate risk assessment: executive summary, EEA Report 01/2024

with the fastest shifts observed in Eastern Europe.²¹¹ Recent studies also point towards additional risks resulting from changing ocean currents that might drastically affect weather patterns in parts of Europe in various ways.²¹²

Proposals should address the following:

- by using current and novel evidence, observations and approaches, develop, test and validate dynamic models of the impacts of climate change – also in relation to possible tipping points – on agriculture, taking into account diverse agroecological systems and pedoclimatic conditions and covering the most important expected impacts (including changes in growing season and crop phenology, water demand and availability/quality, soil health and fertility, crop, grassland and livestock productivity, pests/diseases and parasites, etc.).
- characterise the geo-distribution of cropping systems – also including permanent crops as well as permanent grasslands and other land uses for livestock farming systems, and including currently grown crops as well as others that could be grown under future conditions – in Europe, propose indicators for sustainability, productivity and resilience, and assess production uncertainties, incorporating climate change projections.
- provide tools for decision-making and business strategies at different levels of action, for evidence-based agricultural land use and management strategies based on climate change trends and quantitative projections, enabling farmers and other practitioners to develop and apply tailored, innovative pathways towards adaptation and, where relevant, restoration in agricultural systems.

Proposals should include a dedicated task and resources for cooperation with the other project(s) funded under this topic and for collaborative actions with other related projects under Horizon Europe, including the Mission on Adaptation to Climate Change, and under the Agroecology Partnership.²¹³

The Joint Research Centre (JRC) may participate as member of the consortium selected for funding. The role of JRC would be to explore how extremes such as drought and heatwaves will reshape land suitability to crop production under different scenarios exploiting advanced AI techniques. Furthermore, JRC would explore suitability under different tipping point scenarios, linked for instance to a possible collapse of the Atlantic Meridional Overturning Circulation (AMOC).

This topic should involve the effective contribution of social sciences and humanities (SSH). The integration of existing Earth observation data space ecosystems and the usage of Destination Earth's Climate Adaptation Digital Twin data is encouraged.

²¹¹ European Environment Agency, Climate change adaptation in the agriculture sector in Europe, EEA Report 4/2019

²¹² E.g., Rahmstorf, S. 2024. Is the Atlantic overturning circulation approaching a tipping point? *Oceanography*, <https://doi.org/10.5670/oceanog.2024.501>

²¹³ <https://www.agroecologypartnership.eu/>

HORIZON-CL6-2025-02-CLIMATE-04: Monitoring, reporting, verification and mitigation of non-CO₂ greenhouse gas emissions and related air pollutants from agriculture

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²¹⁴.</p>

Expected Outcome: To help meeting the ambitions of EU climate and agriculture policies, including implementation of the Regulation on Carbon Removals and Carbon Farming²¹⁵, the successful proposals will provide for activities that ultimately lead to a reduction of

²¹⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²¹⁵ https://climate.ec.europa.eu/eu-action/carbon-removals-and-carbon-farming_en

greenhouse gas emissions (in particular gases other than CO₂) from the agricultural sector and to improved monitoring, reporting and verification of the emissions.

Project results are expected to contribute to all of the following expected outcomes:

- monitoring, reporting and verification (MRV), in particular at farm level, of direct and indirect non-CO₂ greenhouse gas (GHG) emissions and related air pollutants is improved;
- improved MRV and insights from practical experience are comprehensively integrated in relevant models and used in agricultural policy development;
- knowledge on the responses of non-CO₂ GHG and air pollutant emissions to different agricultural practices and to climate change and its impacts is enhanced;
- new and better knowledge and approaches for mitigating non-CO₂ emissions are available, widely shared and applied in agricultural practice, in particular by farmers, advisors, and other stakeholders.

Scope: In 2021, the EU agricultural sector accounted for approximately 11% of the total GHG emissions in the EU. The bulk of emissions can be attributed to methane and nitrous oxide, stemming from livestock and release from agricultural soils, in particular due to fertiliser application and manure management. Additional efforts are needed in the sector to help meet the EU's climate targets, in particular climate neutrality by 2050. To promote the uptake of mitigation practices at farm level, better data on their impact and effectiveness are needed. There is also a need for new practical solutions to help farmers monitor and reduce non-CO₂ GHG emissions.

Proposals should:

- focusing on methane (CH₄) and nitrous oxide (N₂O) and including indirect sources of N₂O (soil nitrification/denitrification, ammonia volatilisation, nitrogen leaching), address agricultural practices in manure management, livestock feeding and grazing, soil tillage, fertiliser use and liming in all relevant types of farming systems, including animal husbandry, with a view to developing harmonised metrics and effective mitigation measures;
- through analysis, field experiments, and demonstration activities, assess and improve the accuracy, effectiveness, efficiency and user-friendliness of MRV tools for the above GHGs, reducing uncertainties via established and novel methods and enabling use of higher tiers for reporting under the UN Framework Convention on Climate Change. Regarding emissions related to fertilisation, this should include a life-cycle perspective addressing also direct and indirect emissions related to the production of different types of fertilisers, notably comparing organic to mineral/chemical fertilisers;
- improve understanding of linkages between direct non-CO₂ GHG emissions, notably of N₂O, and other pollutant emissions from agricultural practices (including ammonia), and

assess and develop options for reducing trade-offs between mitigation measures for both types of emissions;

- consolidate and improve knowledge on mitigation measures for agricultural non-CO₂ GHG emissions, and assess the effects of elevated atmospheric CO₂ concentration and climate change impacts on those emissions and on options for their mitigation;
- through dedicated training and outreach activities, build capacity among farmers, farm advisors and other relevant actors for widespread utilisation of improved MRV tools and GHG mitigation measures.

Proposals should include a dedicated task and resources for cooperation with the other project(s) funded under this topic and with other relevant ongoing and forthcoming Horizon Europe project(s) in different Destinations of this Cluster (notably HORIZON-CL6-2025-02-FARM2FORK-07: “Improving grassland management in European livestock farming systems”) and under the EU Mission “A Soil Deal for Europe” (notably HORIZON-MISS-2024-SOIL-01-04: “Systems to quantify nitrogen fluxes and uncertainties in European landscapes”). Proposals should address various farming systems/approaches, one of which should be organic farming, and cover a range of different pedo-climatic zones.

The Joint Research Centre (JRC) may participate as member of the consortium selected for funding. The role of the JRC would be to model trade-offs between CO₂ and non-CO₂ emissions for different farming activities, using MRV tools to support the implementation and further development of the Carbon Removals and Carbon Farming (CRCF) certification framework.²¹⁶

Due to the scope of this topic, international cooperation is strongly encouraged, in particular with China under the EU-China Food, Agriculture and Biosolutions (FAB) flagship initiative.

HORIZON-CL6-2025-02-CLIMATE-05: Additional activities for the European Partnership Water Security for the Planet (Water4All)

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 70.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 70.00 million.

²¹⁶ https://climate.ec.europa.eu/eu-action/carbon-removals-and-carbon-farming_en. The JRC provides support to the implementation of the framework, by providing regional baselines as well as analysis of linkages between CRCF and Common Agricultural Policy emission mitigation potential, and the uptake in the UNFCCC greenhouse gas emission inventories.

<i>Type of Action</i>	Programme Co-fund Action
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The proposal must be submitted by the coordinator of the consortium of the grant funded under HORIZON-CL6-2021-CLIMATE-01-02 and HORIZON-CL6-2023-CLIMATE-01-01: European Partnership Water Security for the Planet (Water4All). This eligibility condition is without prejudice to the possibility to include additional partners.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The evaluation committee will be composed partially by representatives of EU institutions. If the proposal is successful, the next stage of the procedure will be grant agreement amendment preparations. If the outcome of amendment preparations is an award decision, the coordinator of the consortium funded under HORIZON-CL6-2021-CLIMATE-01-02: European Partnership Water Security for the Planet (Water4All) will be invited to submit an amendment to the grant agreement, on behalf of the beneficiaries.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>This action is intended to be implemented in the form of an amendment of the grant agreement concluded pursuant to topic HORIZON-CL6-2021-CLIMATE-01-02.</p> <p>For the additional activities covered by this action:</p> <ul style="list-style-type: none"> • The funding rate is 30% of eligible costs. • Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. • Financial support provided by the participants to third parties is one of the primary activities of this action in order to be able to achieve its objectives. The 60 000 EUR threshold provided for in Article 207 (a) of the Financial Regulation No 2024/2509 does not apply. • The maximum amount of FSTP to be granted to an individual

	<p>third party is EUR 7 000 000 for the whole duration of Horizon Europe²¹⁷. This amount is justified since provision of FSTP is one of the primary activities of this action and it is based on the extensive experience under predecessors of this partnership.</p> <p>The starting date of grants awarded under this topic may be as of the submission date of the application. Applicants must justify the need for a retroactive starting date in their application. Costs incurred from the starting date of the action may be considered eligible (and will be reflected in the entry into force date of the amendment to the grant agreement).</p>
<i>Total indicative budget</i>	<p>The total indicative budget for the topic is EUR 70 million committed in annual instalments over years 2025-2027 (EUR 23 million from the 2025 budget, EUR 23 million from the 2026 budget and EUR 24 million from the 2027 budget).</p>

Expected Outcome: This topic is for the continuation of the European Partnership Water Security for the Planet (Water4All), i.e. EU contribution in WP 2025. The third instalment of the partnership is expected to contribute to expected outcomes specified in topic HORIZON-CL6-2021-CLIMATE-01-02: European Partnership Water Security for the Planet (Water4All), for continuation and new development of activities.

Scope: The objective of this action is to continue to provide support to the European Partnership Water4All identified in the Horizon Europe Strategic Plan 2021-2024 and first implemented under the topic HORIZON-CL6-2021-CLIMATE-01-02: European Partnership Water Security for the Planet, and in particular to fund additional activities (which may also be undertaken by additional partners) in view of its intended scope and duration, and in accordance with Article 24(2) of the Horizon Europe Regulation.

The consortium which applied to and received funding under HORIZON-CL6-2021-CLIMATE-01-02: European Partnership Water Security for the Planet is uniquely placed to submit a proposal to continue the envisioned partnership. Not only did this consortium submit the proposal leading to the identification of the partnership in the Horizon Europe strategic planning 2021-2024, it has also implemented the partnership through co-funded calls between 2021 and 2024 based on this planning and further to topic HORIZON-CL6-2021-CLIMATE-01-02. In this context, the current consortium has particular expertise in relation to the objectives of the Partnership, the activities to be implemented, in particular FSTP calls or other calls/scope of calls clearly required/envisioned pursuant to the initial proposal, and other relevant aspects of the action. In practice, another consortium could not continue the activities of the Partnership underway without significant disruption to the ongoing activities, if at all.

²¹⁷ However, if the objectives of the action would otherwise be impossible or overly difficult (and duly justified in the proposal) the maximum amount may be higher.

The scope of the application for this call on the European Partnership Water Security for the Planet should focus on the 2023-27 programmes according to the partnership's co-created strategic research and innovation agenda for seven years, which includes joint calls for research projects, activities to fostering the uptake of R&I results from various stakeholders, living labs and demonstration sites activities to demonstrate the efficiency of innovative solutions, activities to enhance international collaborations and support the achievement of the water related UN SDGs and transfer of in foreign contexts, where specific challenges can be encountered. Actions to ensure coordination and alignment of EU, national and regional programmes, to strengthen the research/policy interface and all horizontal activities to allow the Partnership to operate and to achieve its specific objectives should be also addressed. Emphasis should also be put on activities contributing to the recently adopted Nature Restoration Regulation, the announced European water resilience strategy and climate adaptation plan.

It is expected that the partnership continues to organise joint calls on an annual base and therefore it should factor ample time to run the co-funded projects.

Specific activities to strengthen the complementarities of Water4All partnership with the related Missions, specifically the Missions Adaptation to Climate Change, Restore our Ocean and Waters by 2030, and a Soil Deal for Europe and Partnerships (Sustainable Blue Economy, Biodiversa+, Driving Urban Transition and others), identified in the proposal submitted by the coordinator of the consortium funded under both HORIZON-CL6-2021-CLIMATE-01-02 and HORIZON-CL6-2023-CLIMATE-01-01 should be also described.

While the award of a grant to continue the Partnership in accordance with this call should be based on a proposal submitted by the coordinator of the consortium funded under HORIZONCL6-2021-CLIMATE-01-02: European Partnership Water Security for the Planet (Water4All) and the additional activities (which may include additional partners) to be funded by the grant should be subject to an evaluation, this evaluation should take into account the existing context and the scope of the two first evaluations as relevant, and related obligations enshrined in the grant agreement.

Taking into account that the present action is a continuation of the topics HORIZON-CL6-2021-CLIMATE-01-02 and HORIZON-CL6-2023-CLIMATE-01-01 and foresees an amendment to an existing grant agreement, the proposal should also present in a separate document the additional activities and any additional partners to be covered by the award in terms of how they would be reflected in the grant agreement.

The partnership should pool the necessary financial resources from the participating national (or regional) research programmes with a view to implementing joints call for transnational proposals resulting in grants to third parties. Synergies with the European Regional Development Fund are encouraged.

HORIZON-CL6-2025-02-CLIMATE-01-two-stage: Strengthening the resilience of water systems and water sector to climate and global socio-economic change impacts

Call: Cluster 6 Call 02 - two stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (see General Annex E).</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.</p>

Expected Outcome: In line with the European Green Deal, notably the EU climate adaptation strategy, the Nature Restoration Regulation, EU water legislation and the upcoming European water resilience strategy, successful proposals will contribute to the impact of this Destination on adaptation and mitigation of water systems in the context of climate change, supporting also biodiversity protection and restoration.

Project results are expected to contribute to all of the following expected outcomes:

- assessing and managing better the changing hydrological cycle, also at fine spatial scales, to reduce water risks amplified by climate change, including floods and droughts, by fostering further development of innovative observing systems to monitor trends in the atmospheric hydrological cycle; by fostering water resilient land use, management and planning and natural water cycle restoration, also contributing to support biodiversity protection/restoration; and by enhancing cross-sectoral and transboundary catchment cooperation between various water use sectors and complementarity between water related policies;
- increasing water use efficiency in all sectors at basin level, balancing better water demand and supply, helping to transform the economics and restructuring the governance of water;
- helping policy makers to prepare for better water infrastructure management and planning allowing among others fair access to drinking water and other essential uses.

Scope: We face a triple interrelated planetary crisis of climate change, biodiversity loss and pollution. Water is at the heart of these challenges. We can no longer ignore the world's crisis of water. The global hydrological cycle is changing. During the last three consecutive years, we have also witnessed not only worrying droughts in many regions of the EU, reaching eastern and northern countries which have been so far preserved, but also catastrophic pollution incidents and deadly floods across Europe. These events are no longer exceptional events. As scientists revealed very recently, human-caused climate change has made these episodes at least 20 times more likely. Moreover, groundwater levels sink steadily in Europe and globally, and the EU water balance is greatly perturbed. This increases tensions in agriculture, energy production and water supply and it is threatening drinking water, food and energy security, the health of ecosystems and the services they deliver, and our way of living.

These issues are highly interlinked, and they must be addressed together, under the remit of the water, energy, food, and ecosystem (WEFE) nexus. Moreover, recent JRC research shows that reduced freshwater flow of rivers into the sea can have severe impacts on coastal and marine ecosystem and their services, for example wild capture fisheries. This emphasizes the need to adopt the “from the source to the sea” approach when tackling water resilience with a support to biodiversity protection/restoration.

According to the EC communication “Managing climate risks – protecting people and prosperity”, “protecting and restoring the water cycle, promoting a water-smart EU economy and safeguarding good quality, affordable and accessible freshwater supplies to all is crucial to ensure a water-resilient Europe. [...] Water needs to be managed, and human demand needs to be adjusted to the new and more scarce supply”.

The objective of this topic is to compare and demonstrate the potential of available state of the art tools to forecast the availability of water resources at the regional and local scale, building

also on JRC and other available tools developed for the European scale²¹⁸. It should take into consideration both the global water cycle (blue and green water) and sectoral water demands for both seasonal and long-term horizon, with an integrated water management approach. It should consider water allocation tools for different uses integrating the quality needed for each use, as well as tools for resilient urban planning and water infrastructure management allowing among others run-off control, reducing flood and drought risks, ensuring safety of citizens and infrastructures and support to biodiversity protection/restoration.

Demonstrations should take place in diverse European regions on a suitable scale e.g., river basin, and should bring together a wide range of relevant stakeholders, including relevant water sectors, water managers and authorities, urban and rural planners, policy makers and the civil society. Solutions aiming at fostering and restoring natural retention measures to keep water in the landscape, mitigating drainage losses, enhancing water retention in watersheds to mitigate extreme events, including both drought and flood, should be explored. Proper attention should be given to actions aiming at overcoming the fragmentation of water monitoring and observation data by strengthening the complementarity between satellites, in situ data, participatory research and integrated assessment models. This should foster the consolidation for better-quality and higher frequency data, reducing uncertainty and increasing trust and making them responsive to end-users' needs.

Appropriate climate change adaptation and mitigation strategies and tools, such as, tools for resilient urban and rural planning to manage runoff, reduce flood risk and ensure the safety of citizens and water infrastructures, should then be developed to strengthen the resilience of the water sector. These strategies should in particular assess the following:

- strategies and technical cost-efficient and sustainable solutions for alternative water resources production adapted to the anticipated use;
- the governance of water resource management to better consider the interlinkages of various water related policies to ensure reliable allocation of water for different uses and cross-sectoral coordination;
- the suitability of current indicators to appropriately define water efficiency in various sectors and provide a harmonised methodology to increase water efficiency;
- strategies to anticipate the consequences of recurrent extreme events, including land use analysis (e.g. floods and droughts) and reduce the associated risks;
- water resilience by exploring water transfer effects for seasonal, annual and pluriannual time-horizon on ecosystems, populations, agriculture, industrial consumption;
- the suitability of solutions to support biodiversity protection/restoration with attention given to avoiding spread of invasive alien species and to ensuring enough water for entire ecosystems (all species and their populations in healthy state).

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<https://publications.jrc.ec.europa.eu/repository/handle/JRC124342>

Moreover, the economic foundation of the current water management systems, including water pricing and trade policies, in the context of changing climate should be reviewed to provide elements for a new economic framework helping to better structure the cost of building/operating/monitoring the water infrastructures, increase demand for innovative solutions and strengthen private investments for large scale deployment of these solutions in the water sector.

Proposals should avoid duplication with related ongoing work of the JRC and other EU funded projects, while strengthening complementarities with relevant EU Missions and Partnerships (e.g. Water4All, Biodiversa+). Proposals should build on the assessment reports of the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES), particularly the forthcoming IPBES nexus assessment. Where relevant, proposals should build on or further enhance existing hydrological modelling tools and water relevant tools and datasets of the Copernicus Emergency Management Service, Climate Change and Land Monitoring Services and leverage products and services offered by the from Destination Earth initiatives. Proposals should build synergies and complementarities with other related Horizon Europe projects. To this end, proposals should plan the necessary budget to cover related cluster activities.

This action should bring together a wide range of relevant stakeholders, i.e, researchers, technology providers, water utilities, business representatives, investors, policy makers and other water users and citizens to maximise impact. When engaging stakeholders, gender and other social categories (disability, age, socioeconomic status, ethnic and / or cultural origins, sexual orientation, etc.), and their intersections, need to be considered. The possible participation of the JRC would ensure that the assessment of available state of the art tools to forecast the availability of water adequately integrates the existing JRC related work.

Due to the strong socio-economic dimension of water management, the integration of SSH, including gender studies, and Citizen Social Science approach expertise are also needed to ensure the proposed climate change adaptation and mitigation strategies are socially accepted and no one is left behind.

Destination - Resilient, inclusive, healthy and green rural, coastal and urban communities

R&I under destination “Resilient, inclusive, healthy and green rural, coastal and urban communities” will contribute to the implementation of the Horizon Europe Strategic Plan 2025-2027. In particular, it will deliver under the Key Strategic Orientation (KSO) 3: a more resilient, competitive, inclusive and democratic Europe and to a lesser extent to KSO 1: the green transition, and KSO 2: the digital transition.

Places and people, as well as their culture, matter to the achievement of a more sustainable Europe. The European Green Deal's ecological and digital transitions, along with the resulting spatial, socio-economic, behavioural, and cultural implications present unique challenges and opportunities for different regions and populations. Rural (including mountains) and coastal areas play a key role in managing and protecting the environment, as well as natural and cultural heritage. The provision of both private and public goods from these territories depends on the resilience and attractiveness of rural and coastal areas and the capacity of people who live and work there to attain an adequate level of well-being.

This destination will make a key contribution to the action plan flagship initiative “R&I for rural communities” and to the four areas of work of the long-term vision for EU’s rural areas (LTVRA): stronger, connected, resilient, and prosperous.

This destination will as well contribute to sustaining our quality of life, achieve a circular and resilient economy, support people to access affordable housing, the EU territorial agenda for 2030 promoting a future for all places, the ambitions of the food 2030 R&I initiative as well as the EU bioeconomy strategy.

On social related research and innovation, this destination contributes to the implementation of the pillar of social rights and its action plan and to develop a Union of equality.

On an international level, the relevant topics under this destination will support the objectives of the joint communication on the EU Arctic policy, and the all- Atlantic Ocean research and innovation alliance (AAORIA) which has recently prioritised the need to bring science and innovation solutions to coastal communities facing climate threats and to enhance the coastal resilience of cities, regions and islands. The destination will contribute to the aim of the Commission to step up work on climate resilience and preparedness, including work on the priorities of the European Ocean Pact.

Proposals for topics under this destination should set out a credible pathway to contributing to **sustainably developing rural, urban and coastal areas**, and more specifically one or several of the following expected impacts:

- rural, coastal and urban communities are empowered to act for a transformative change to become sustainable and resilient, through better access to knowledge and services, and are better prepared to adapt to climate change and to achieve climate neutrality and environmental objectives.

- rural communities are prepared to manage demographic trends and to mitigate their social, economic and environmental impacts through enhanced territorial governance and innovative inclusive solutions.
- urban and peri-urban communities can access affordable, healthier, nutritious and environmental-friendly food, and benefit from synergies and a systemic approach across the urban-rural interface as well as from enhanced local and regional governance and public services.
- people and the environment will benefit from climate change adaptation. Coastal communities will have better knowledge and become more resilient and better equipped to tackle extreme weather events thanks to deployment of latest scientific research results and innovative solutions, including nature-based solutions.
- communities have access to ocean knowledge, data, tools, training and can develop skills that support them to take evidence-based decisions to respond to climate change with socially acceptable measures in their territories.

Under destination “Resilient, inclusive, healthy and green rural, coastal and urban communities”, the Work Programme 2025 will fill the knowledge gaps in domains that were not tackled in Horizon 2020 or Horizon Work Programmes 2021-2022 and 2023-2024, as indicated in the Strategic Plan 2025-2027. The destination places emphasis on actions that will exploit knowledge created under previous Work Programmes and research, and will deliver impact as well as increase sustainability, resilience, inclusiveness, and competitiveness. The focus is on tackling the impacts of demographic changes and environmental extreme events which cause uncertainty, by engaging communities in decision-making processes, improving policy instruments for policy responses that are evidence based and considering local needs. This Work Programme also contributes to improving access to services, job opportunities, good environmental conditions, and energy-efficient housing in rural areas.

The multi-actor approach may be used in a significant number of topics. Relevant topics under this destination should include social sciences and humanities (SSH), including gender studies, to apply a human-centered approach, as well as make use of social innovation to meet local needs by co-creating place-based solutions.

Coordination will be ensured with the use of the EC knowledge centre for bioeconomy, the EU rural observatory, the EU soil observatory, and the EU Missions “A Soil Deal for Europe”, “Restore our Oceans and Waters” and “Adaptation to Climate Change”, as well as with the New European Bauhaus (NEB) Facility.

To maximise the impacts of R&I under this destination, international cooperation is encouraged when appropriate.

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-02-COMMUNITIES-01: Adapting to and mitigating demographic trends in rural areas through evidence-based planning and innovative solutions

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 13.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: the proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: The successful proposals will support the implementation of the long-term vision for EU's rural areas, contribute to empower rural communities for transformative change to become sustainable and resilient, as well as to manage and adapt to a changing population.

Project results are expected to contribute to all of the following expected outcomes:

- improved understanding by all relevant actors of the causes and of the social, economic and environmental impacts of demographic trends in rural areas;
- rural communities are prepared to respond to the challenges of demographic trends thanks to evidence-based planning, appropriate actions, and through the inclusive engagement of stakeholders;
- the well-being of rural communities and the attractiveness of rural areas is improved thanks to sustainable and innovative solutions.

Scope: Rural areas cover more than 80% of the EU territory and host approximately 30% of its population. Rural communities and areas provide essential ecosystem services for the whole society, such as food production, energy provision, management of natural resources as well as access to nature and cultural heritage. They play an essential role in the green and digital transitions. However, almost 9 out of 10 predominantly rural regions reported negative crude rates of natural population change during the period 2015–2020. In particular, the number of people aged 65 years or over increased by 1.8% each year in predominately rural regions. By contrast, the number of working-age people (20-64 years old) living in predominantly rural regions fell, on average, by 0.6% each year (EUROSTAT)²¹⁹.

Many rural areas also face high variation of their populations, such as seasonal peaks that challenge the local infrastructures and services which are often calibrated only on permanent inhabitants. While some are affected more than others by negative demographic trends.

Proposals should address all of the following:

- advance the understanding of the causes and social (including but not limiting to gender and intersectional differentiations), economic and environmental impacts (including but not limiting to consequences related to land abandonment or land use changes also considering the green transition) of demographic trends;
- focus on how to support rural communities through evidence-based strategies that includes planning, monitoring of fluctuations, and propose appropriate actions to respond to population changes;
- find innovative solutions to mitigate and adapt to a changing population in rural areas. Particular attention should be paid to rural areas that are highly exposed to climate change effects.

The funded consortium should work on collecting evidence for better planning and develop sustainable and comprehensive long-term strategies for managing a changing population by considering the needs of rural communities. These needs should be identified by using an inclusive multi-actor approach. Consideration of gender and other social categories (disability, age, socioeconomic status, ethnic and/or cultural origins, sexual orientation, etc.), and their intersections, must be ensured.

Proposals should test, develop and pilot innovative sustainable solutions that improve the well-being of rural communities based on their needs. In particular, they should focus on providing or co-creating with local communities innovative services that respond to the changing population, foster the sustainable development of strategic sectors, and support job creation in rural areas.

Financial support may be provided by the participants to third parties in the form of grants, in particular for the development, testing and piloting of sustainable solutions. If proposals

²¹⁹ [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Urban-rural Europe - demographic developments in rural regions and areas](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Urban-rural_Europe_-_demographic_developments_in_rural_regions_and_areas)

decide to use this option, the consortium should also coordinate activities funded under the financial support to third parties and take stock of results for recommending appropriate policy measures.

Proposals should also focus on the sustainability and replicability of strategies and solutions. Moreover, proposals should develop an accessible tool, also making use of digital technologies, to support local and regional decision-makers to assess demographic impacts and plan for the future with evidence-based strategies in the framework of the just, fair and green transition.

Proposals must implement the multi-actor approach to involve relevant stakeholders, in particular for the development of innovative solutions, which may include public authorities, rural communities, as well as SMEs, organisations, and social economy actors.

Proposals should build on research done by the EU rural observatory, and by relevant projects funded under Horizon Europe.

Moreover, proposals should link with the demographic toolbox²²⁰.

This topic must involve the effective contribution of social sciences and humanities (SSH), including gender studies. Proposals are encouraged to consider, where relevant, the services offered by European research infrastructures such as the European social survey (ESS ERIC).

HORIZON-CL6-2025-02-COMMUNITIES-02: Exploring and improving access to housing in rural areas and developing the houses and villages of the future

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: the proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>

²²⁰ Communication “Demographic change in Europe: a toolbox for action, https://commission.europa.eu/publications/communication-demographic-change-europe-toolbox-action_en

<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²²¹.</p>
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Expected Outcome: The successful proposal will support the implementation of the long-term vision for EU's rural areas, and of the European pillar of social rights and its action plan, as well as to social fairness. Moreover, the successful proposal will contribute to empowering rural communities for transformative change, enabling them to become sustainable and resilient, in line with the Green Deal objectives and the Commission's priority to support people, strengthen our societies and our social model.

Project results are expected to contribute to all of the following expected outcomes:

- policymakers have better understanding of the real estate and rental markets (including short-term and long-term rentals) in rural areas as well as their social impacts on rural communities;
- new solutions and strategies that improve access to affordable, quality housing and social housing for rural communities are available and widely shared among relevant stakeholders;
- affordable, sustainable and replicable solutions for sustainable, greenhouse gases nearly non-emitting, climate-resilient and climate smart houses and villages of the future are in place to benefit rural communities.

Scope: At European level, there is a lack of research on the rural real estate issues and different rural areas are affected differently by demographic trends and migration flows. Covid 19, and the new teleworking possibilities also strongly impacted the real estate market in rural areas. Some rural areas are experiencing gentrification processes, others are faced with seasonal touristic flows, while others are affected by depopulation. Affordable and adequate housing, as well as adequate access to services and infrastructure, are not only an essential part of quality of life, but they are also a prerequisite to ensure the attractiveness of a place and therefore the accessibility of labour workforce for strategic sectors for the rural economy.

Proposals should address all of the following:

²²¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- analyse the real estate and rental markets (including short-term and long-term rentals) in rural areas and evaluate housing quality and housing poverty; the analysis should include an evaluation of the demand and supply side and an identification of the stakeholders;
- contribute to increase data availability, making use also of digital technologies, in relation to type of settlement structures and buildings and include an in-depth analysis of the abandoned or in state of collapse units, showcasing best practice to recover and reuse buildings when socially, economically and environmentally sustainable;
- increase the understanding of the access to affordable, quality housing and social housing in rural areas considering also financial aspects such as access to finance and price affordability, as well as social aspects such as gender, age, ethnicity, or disability;
- provide recommendations to policy makers on how to regulate the real estate and rental markets and to promote sustainable, nearly-zero emitting housing renovation or construction where needed to benefit rural communities, including people in a vulnerable situation, and ensure affordable and accessible housing;
- run participatory processes involving rural stakeholders to design sustainable houses and villages of the future, paying particular attention to affordability and replicability of innovative solutions (including intergenerational, multiuse, and reuse approaches) as well as to the adaptation to and mitigation of climate change. Solutions should include innovations in terms of improved renovations, insulation, energy and water efficiency and use and reuse of local materials, circularity of materials, as well as of reducing pollution (including air pollution) and soil sealing in rural areas.

Proposals must use the multi-actor approach and involve relevant actors in particular to develop houses and villages of the future.

Proposals should build on research done by the EU rural observatory, and by relevant projects funded under Horizon Europe.

Collaboration and complementarity with the New European Bauhaus (NEB) Facility is encouraged.

This topic must involve the effective contribution of social sciences and humanities (SSH), including gender studies. Proposals are encouraged to consider, where relevant, the services offered by European research infrastructures such as the European social survey (ESS ERIC).

HORIZON-CL6-2025-02-COMMUNITIES-03: Innovative solutions for resilient and climate-adapted coastal communities in the Atlantic

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU</i>	The Commission estimates that an EU contribution of around EUR 6.00

<i>contribution per project</i>	million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: the proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p> <p>Due to the scope of this topic, legal entities established in Brazil are exceptionally eligible for Union funding.</p> <p>In order to achieve the expected outcomes of the action, namely contribution to the implementation of the All-Atlantic Ocean Research and Innovation Alliance (AAORIA) Declaration, participation, as a beneficiary or associated partner, of at least three legal entities established in at least three of the following countries is required: Argentina, Brazil, Canada, Cape Verde, Ghana, Iceland, Morocco, Norway, Senegal, South Africa, United Kingdom, United States of America.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7 by the end of the project – see General Annex B.

Expected Outcome: In line with the European Green Deal, notably the EU climate adaptation strategy, the 2030 biodiversity strategy, the European Ocean Pact and EU policies to protect Europe's ocean, seas and coasts, a successful proposal will contribute to the impacts of this Destination related to coastal communities.

Project results are expected to contribute to all of the following expected outcomes:

- deliver tangible benefits and support to Atlantic²²² coastal communities, managing authorities, and citizens, aimed at increasing their resilience to climate change and other environmental challenges, including those affecting coastal ecosystems;
- enhance the capacities of coastal communities for adaptation to environmental change by fostering innovation, and professional skills and competences within an intergenerational context. Building community climate change literacy through creating inclusive learning spaces that also take into account the local cultural heritage and traditional knowledge and are sustainable in the long-term;

²²² This encompasses coastal communities from all Atlantic countries, including those outside the EU, reflecting the pole-to-pole dimension of the All-Atlantic Ocean Research and Innovation Alliance.

- contribute to the implementation of the All-Atlantic Ocean Research and Innovation Alliance (AAORIA) Declaration²²³ and particularly the recently agreed area of action²²⁴ on increasing resilience of coastal communities.

Scope: Approximately 1 billion people around the globe inhabit vulnerable low-lying coastal areas facing multiple environmental threats, such as extreme weather events, sea-level rise, saltwater intrusion into coastal ecosystems, increased water temperatures and ocean acidification. The latest IPCC report warns of further intensification of these threats, projecting a tenfold increase in coastal flood damage by the end of the 21st century and potential damage to coastal ecosystems, infrastructure, economic sectors, livelihoods, and human health. An urgent, coordinated effort to increase coastal resilience²²⁵ has therefore become imperative.

The need to develop outcome-oriented science to enhance the resilience of coastal communities was recently prioritised by AAORIA, a science diplomacy initiative focusing on ocean research and innovation. AAORIA partners²²⁶ have a wealth of already existing innovative ideas, knowledge and solutions for enhanced coastal resilience which could be used by coastal communities to create tangible change.

The European Commission, together with an AAORIA's coordination and support action OKEANO, has started to collect this knowledge and make it available to communities around the Atlantic. But considerable effort is still needed to further develop and expand the range of solutions and services to be made accessible to and co-created with the communities.

This topic contributes to the implementation of the updated Action Plan for a sustainable, resilient and competitive blue economy in the European Union Atlantic area.

Proposals should address all of the following:

- engage with Atlantic coastal communities to understand their unique challenges, concerns, current strategies for adaptation to climate change, and traditional environmental knowledge, and to gather valuable insights into the specific needs and priorities of these communities in the context of coastal resilience;
- work towards enhancing coastal resilience in the Atlantic by building and testing a comprehensive toolbox²²⁷ of scientific outputs and traditional knowledge addressing the community needs for increased coastal resilience, building on the work undertaken by

²²³ [SKM_80822071310280 \(allatlanticocean.org\)](https://skm.80822071310280.allatlanticocean.org)

²²⁴ See of AAORIA 2023 Forum listing the two current priority areas of action of AAORIA

²²⁵ For this action, the definition of coastal resilience proposed by the European Marine Board position paper "[Building Coastal Resilience in Europe](#)" applies: the capacity of coastal natural and socio-economic systems to persist, adapt or transform when faced with disturbances induced by factors such as sea-level rise, extreme events and human impacts, whilst maintaining their essential functions (Folke, 2006; Masselink & Lazarus, 2019).

²²⁶ See partners at [All-Atlantic Ocean Research and Innovation Alliance \(allatlanticocean.org\)](https://allatlanticocean.org).

²²⁷ For this action, the toolbox is intended as a repository of available knowledge, and practices aimed at enhancing coastal resilience; this could include case studies, examples of what has worked in various environments for various aspects of coastal resilience, methodology, description of technological solutions, etc outputs of existing research projects and initiatives.

OKEANO project. The toolbox should include knowledge and solutions for various aspects of coastal resilience, including measures to protect and restore coastal ecosystems as nature-based solutions. As part of the toolbox, the proposals should consider and, where needed, develop methods and tools that would allow the communities to anticipate the diverse impacts of adaptation actions and measures, including on their most vulnerable members, and thus to avoid climate maladaptation²²⁸ risks. In this context, proposals should consider the gender dimension and other social categories²²⁹ and their intersections in disaster preparedness and capacity-building. A dynamic system for regular updates and refinement of the toolbox should be designed, based on emerging research and feedback from communities. An ongoing collaboration between scientists, policymakers, and community representatives should be fostered to ensure the relevance and effectiveness of the solutions included in the toolbox;

- to improve the production, access, and use of the knowledge responding to local community needs, and to support and complement the activities of the living labs, proposals should develop an interface²³⁰ enabling communities to choose a tailor-made mix of coastal resilience solutions uniquely responding to their needs, in a way that increases societal buy-in and acceptance of the solutions while avoiding maladaptation risks;
- for the digital element of the interface, proposals should design an online platform connecting available coastal resilience knowledge and solutions with community needs in a user-friendly manner, and produce interoperable, tailor-made digital applications. Proposals should consider complementarities with other platforms that already exist, such as those of the Mission Restore our Ocean and Waters and Mission Adaptation to Climate Change. The platform should allow for easy integration with existing digital decision-making, mapping and planning tools, for instance, by offering API (Application Programming Interfaces) integration which enables the platform to connect with existing digital tools and systems, allowing for the seamless exchange of data and functionality between systems;
- the toolbox and interface should be tested and piloted in living labs²³¹ based on a systematic user co-creation approach in real life communities and settings. Proposals should create the living labs in a diverse set of Atlantic communities, such as coastal cities, regions and islands (including small island developing states), from different parts of the Atlantic, and other relevant communities living at the intersection of marine, coastal and freshwater areas, with a particular attention to those that are highly

²²⁸ Climate maladaptation has been highlighted in the sixth Assessment Report of the IPCC and refers to a situation when climate change adaptation actions backfire, further deepening existing social inequities and leading to adverse outcomes.

²²⁹ Such as disability, age, socioeconomic status, ethnic and/or cultural origins, sexual orientation, etc.

²³⁰ For this action, the interface is intended as a combination of digital means, participatory approaches and guidelines that would allow coastal communities to access the repository (toolbox) of coastal resilience related knowledge, and practices, and to select the right mix of solutions for their unique resilience needs.

²³¹ [What are Living Labs - European Network of Living Labs \(enoll.org\)](https://enoll.org)

vulnerable to the risks of climate change. These living labs could also serve as centres for knowledge dissemination, training, community engagement, and collaborative problem-solving. Using the results of relevant projects²³², proposals should select appropriate participatory processes or develop new ones that would involve a broad range of stakeholders from the local communities where the toolbox and interface would be used;

- To empower local coastal communities to make evidence-based decisions in response to environmental change within their territories, proposals should promote innovation and enhance human capacity through the establishment of learning spaces, knowledge exchange, training, participatory process of visioning and skills development, based on the contents of the toolbox. Attention should be given to securing the long-term sustainability of these activities.

Proposals must implement the multi-actor approach, to ensure an adequate involvement of researchers and relevant stakeholders (e.g. regional and local authorities, citizens, youth, NGOs, local businesses, private investors, social innovators, etc) from the target communities. They should also integrate SSH disciplines, including gender studies and citizen social science where relevant.

International cooperation is strongly encouraged, especially with AAORIA partner countries and other Atlantic countries.

To ensure complementarities and avoid overlaps, the proposals should foresee to work closely with relevant ongoing Horizon Europe projects, particularly the OKEANO project, and, where relevant, the projects funded under the topic HORIZON-MISS-2025-01-CLIMA-03, and relevant projects of the Mission ‘Restore our Ocean and Waters by 2030’ and its Atlantic and Arctic lighthouse (e.g. A-AAGORA and CLIMAREST), and the Mission Ocean Implementation Platform (MIP)²³³, notably on deployment and upscaling of solutions. Proposals should also consider results of other Horizon 2020 and Horizon Europe projects such as TRIATLAS, the projects of the ADAPT4COAST cluster, ILIAD, DestinE, the EU Digital Twin of the Ocean and other relevant projects, programmes, and initiatives, including from AAORIA partner countries and other countries around the Atlantic, as well as relevant work under the OSPAR convention²³⁴.

HORIZON-CL6-2025-02-COMMUNITIES-04: Creating urban co-creation spaces for driving sustainable food system transformation

Call: Cluster 6 Call 02 - single stage	
Specific conditions	
<i>Expected EU</i>	The Commission estimates that an EU contribution of around EUR 6.00

²³² Such as those from the [ADAPT4COAST project cluster](#) and [EmpowerUs project](#).

²³³ [Mission Ocean, Seas and Waters Implementation Support Platform | Ecologic Institute](#)

²³⁴ [OSPAR Commission | Protecting and conserving the North-East Atlantic and its resources](#)

<i>contribution per project</i>	million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²³⁵ .

Expected Outcome: The successful proposal will contribute to the European Green Deal priorities and the farm to fork and the EU biodiversity strategies, as well as of the EU's climate ambition for 2030 and 2050. It will also contribute to the Food 2030 priorities: nutrition for sustainable healthy diets, circularity and resource efficiency, innovation and empowering communities.²³⁶ The successful proposal will support the development of policies, business models and market conditions contributing to the sustainable and inclusive development of urban areas and to the empowerment and resilience of their communities, who can access, afford and choose sustainable food.

Projects results are expected to contribute to all of the following expected outcomes:

- enhanced skills and problem-based learning to change food cultures, behaviours and food environments;
- improved local governance frameworks for social inclusion and social economy in urban areas;

²³⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²³⁶ European Commission, Directorate-General for Research and Innovation, Bizzo, G., Fabbri, K., Gajdzinska, M. et al., Food 2030 – Pathways for action 2.0 – R&I policy as a driver for sustainable, healthy, climate resilient and inclusive food systems, Publications Office of the European Union, 2023, <https://data.europa.eu/doi/10.2777/365011>

- improved understanding of the local policy ‘mix’/package of measures as well as the effective communication and marketing strategies that are needed to support EU consumer behavioural change towards sustainable diets.

Scope: Achieving sustainable food systems requires managing numerous interconnected activities and actors with an impact on nutrition, environmental and economic outcomes of great relevance to the EU, including the Sustainable Development Goals (SDGs). Understanding food systems interconnections and interdependencies is crucial in decision making processes to steer a food system change. Yet, for governments to promote more sustainable food systems, they will need to improve their capacity to deal with the complexity of interdependencies with adequate governance mechanisms and principles to support a more systemic approach. Strengthening food systems governance in the urban context is an important area and opportunity for research, innovation and implementation to accelerate sustainability impact in the local context. It has the potential to enhance more coordination and coherent actions, leading to the development of more effective urban policies that ensure food security and nutrition for all without compromising economic, environmental, and social foundations.

Proposals are expected to address at least three of the following:

- create innovative hands-on living labs and co-creation spaces that actively engage all parts of society to enhance skills and capacity building toward healthy, affordable and environment- and climate-friendly diets; and apply randomized controlled trials, for different age groups (especially young people and the elderly), socio-economic groups and their different needs;
- promote and establish sustainable / regenerative community gardens and indoor and open field small-scale urban agriculture for skills building and network creation and share best practices from other areas/cities not covered by the proposals;
- enhance participation of vulnerable groups, such as young people (including those not in education or employment), elderly people, migrants, homelessness people, ethnic minorities, pregnant women, and persons with disabilities, in living labs and community gardens to strengthen inclusion as well as intercultural and intergenerational cohesion;
- enhance attractiveness of safe, healthy, environment-friendly food, for instance by making use of social media and partnering up with different actors (e.g., chefs, nutritionists and dieticians, food scientists and technologists, food industry, start-ups R&D, social/solidarity economy actors, etc.);
- involve local and regional governance mechanisms to enable structural change, for instance by developing and implementing effective participatory and inclusive processes which enable and stimulate an extensive dialogue on food system transformation and involve diverse stakeholders (e.g., citizens, farmers, consumers, civil society organizations, research institutions, businesses, and public authorities at the local or regional levels);

- connect different living labs and build networks, also from previous EU funded projects, for joint learning and best practice exchange;
- establish data monitoring approaches (e.g. through using machine learning approach, AI, etc.) and a test-control approach for impact assessment and evidence-based policy making.

Proposals should include a dedicated task in the workplan and appropriate resources to collaborate with the projects funded under this topic and under topic HORIZON-CL6-2022-GOVERNANCE-01-01 (Mobilisation of society to transform food systems for co-benefit, Cleverfood).

Collaboration and complementarity with the European Partnerships on “Sustainable Food Systems”, “Agroecology”, the EU Missions “A Soil Deal for Europe” and “Climate-Neutral Smart Cities”, and the New European Bauhaus (NEB) Facility is encouraged.

Cooperation with the JRC may be envisaged, in particular for actions related to monitoring and improving the governance of food systems.

Proposals should integrate the gender dimension where applicable. Consideration of other social categories besides gender (disability, age, socioeconomic status, ethnic and/or cultural origin, sexual orientation, etc.), and their intersections, should be also ensured. The use of multi-actor approach is encouraged.

This topic should involve the effective contribution of Social Sciences and Humanities (SSH) disciplines.

In order to achieve the expected outcomes, cooperation with legal entities established in widening countries is strongly encouraged. International cooperation is also encouraged.

Destination - Innovative governance, environmental observations and digital solutions in support of the Green Deal

Staying the course on the goals of the European Green Deal and related policy initiatives in a fast-changing context, the EU needs innovative and agile governance models and tools that enable sustainable prosperity and competitiveness. To this end, it is crucial to invest in R&I that delivers evidence-based knowledge and tools, which support decision-making processes and designing effective policy mixes that enable the twin green and digital transitions engaging society at large in a just manner ensuring that no one is left behind. R&I activities under this destination intend to assist policymakers (from the local to the global level) in dealing with complexity and to enable them to introduce science-based arguments for social debates, to compare options for action and to make evidence-based decisions. A higher degree of coordination and convergence across the scientific community and other networks channelling evidence-based knowledge for policymaking will be promoted. Some of the R&I activities will support the development of sustainable, circular and inclusive bioeconomy and its bio-based sectors in line with the bioeconomy strategy²³⁷ and the communication on biotechnology and biomanufacturing in the EU²³⁸ as well as the forthcoming new European biotech act²³⁹. New knowledge and innovations will support the common agricultural policy (CAP) and related EU initiatives, focusing specifically on reinforcing farmers' position in the value chains, as well as rewarding farmers that work with nature, preserving biodiversity and natural ecosystems and helping to decarbonise the economy on the way to net-zero by 2050. R&I activities will also contribute to boosting the attractiveness of agriculture and the links between the farming community, in particular young farmers, and the society at large.

Data and intelligence provided by environmental observations are key for assessing the state of the planet, including its biodiversity and the pollution of its air, soils and waters, thus supporting the EU biodiversity strategy for 2030²⁴⁰, the Nature Restoration Law²⁴¹, the EU zero pollution action plan²⁴² and the announced European Ocean Pact. R&I and related coordinating activities under this destination will improve environmental observing systems and provide Earth Intelligence, i.e. targeted and actionable environmental knowledge and insights, that will support policymakers, society and economy in navigating the transformative changes required by the European Green Deal. Towards these ends, technological solutions and data governance models will be advanced in order to make environmental data more available, accessible, usable and inter-operable at European and global level. Some topics under this destination support the Group on Earth Observations (GEO), which is an international partnership that aims at delivering Earth Intelligence to decision makers at all levels. It offers a unique forum for international cooperation and the opportunity to scale-up solutions developed in Europe and other regions of the globe, in particular under the European programme Copernicus, advancing the implementation of the UNFCCC Paris Agreement, the

²³⁷ [Bioeconomy strategy - European Commission \(europa.eu\)](https://ec.europa.eu/bioeconomy/en/bioeconomy-strategy)

²³⁸ [47554adc-dffc-411b-8cd6-b52417514cb3_en \(europa.eu\)](https://ec.europa.eu/biotechnology/en/biotechnology-and-biomanufacturing-in-the-eu)

²³⁹ https://commission.europa.eu/document/download/e6cd4328-673c-4e7a-8683-f63ffb2cf648_en?filename=Political%20Guidelines%202024-2029_EN.pdf

²⁴⁰ [Biodiversity strategy for 2030 - European Commission \(europa.eu\)](https://ec.europa.eu/biodiversity/en/biodiversity-strategy-for-2030)

²⁴¹ [Nature restoration law – Final text adopted by European Parliament and Council \(consilium.europa.eu\)](https://ec.europa.eu/nature/restoration-law)

²⁴² [Zero Pollution Action Plan - European Commission \(europa.eu\)](https://ec.europa.eu/zero-pollution/action-plan)

Sendai Framework for Disaster Risk Reduction, the 2030 Agenda for Sustainable Development, and the New Urban Agenda, as well as endeavours like the Kunming-Montreal Global Biodiversity Framework, the UN Early Warnings for All and the WMO Global Greenhouse Gas Watch initiatives.

EuroGEO is the regional initiative in GEO implementing a policy- and user-driven research and innovation agenda to maximise uptake and engagement of EO applications, building on Copernicus and other EU assets in Earth Observation, that are addressing the above-mentioned GEO priorities. EuroGEO will be enabled to provide Earth Intelligence to local administrations or businesses with targeted decision support to increase the resilience and environmental performance of their operations. R&I activities will help also to implement the EU Arctic policy, by improving and integrating polar observation systems in response to user requirements at local, regional and international levels.

There is a need to unlock the potential of applied digital and data technologies to support sectors covered by this Cluster in becoming more productive, competitive, sustainable, resilient, competitive, and inclusive in line with the evolving EU policy initiatives in the fields of cyber, data and digital technologies and services (e.g., European data strategy and future European data union strategy, Europe's digital decade policy programme and the AI innovation package, including the announced apply AI strategy). This destination will contribute to the development and diffusion of innovative digital and data-based solutions to support economic sectors relevant for Cluster 6 and society at large to achieve the European Green Deal targets and objectives. The key focus in this destination will be on enhancing sustainable rural development through digital twins for rural communities, agriculture and forestry.

As stressed in the Political Guidelines for the next European Commission 2024–2029, Europe needs a radical step change in ambition and action for all skill levels and for all types of training and education for sustainable prosperity and competitiveness. The common agricultural policy (CAP) cross-cutting objective and the Pact for Skills highlight the important role that knowledge and skills play in enabling all actors relevant to this cluster to actively engage in the twin green and digital transitions. Effective Agriculture Knowledge and Innovation Systems (AKIS)²⁴³, defined as the combined organisation and knowledge flows between persons, organisations and institutions who use and produce knowledge for agriculture and interrelated fields, are key to facilitate the sharing and uptake of knowledge, skills and innovative solutions for a more competitive, sustainable and resilient economy. In synergy with the CAP, activities under this destination will strengthen AKIS at European and national level, by increasing the knowledge flows among the AKIS actors (in particular practitioners), building a community of competent and impartial advisors and preparing the farming community to the future of agriculture through improved education and training

²⁴³ AKIS fosters flows of knowledge and skills to support the actors in the sustainability transitions across the Cluster 6 destinations; they go beyond agriculture, farming and rural activities and cover environment, climate, biodiversity, landscape, bioeconomy, consumers and citizens, i.e., all food and bio-based systems including value chains up to the consumer.

systems. Specific attention will be also given to boosting the co-creation and use of R&I results in practice via enhanced implementation of the multi-actor approach (MAA).

Proposals responding to the topics under this destination should set out credible pathways to **developing innovative governance models and tools enabling sustainability and resilience**, and more specifically to one or several of the following **impacts**:

- effective policy mixes and multi-level governance enable a just sustainable transition for all, engaging society at large and balancing economic, social and environmental goals, thanks to improved evidence-based knowledge, tools and science-policy interfaces;
- competitiveness, sustainability and resilience of the economy are increased by more accessible and interoperable environmental observations as well as data technologies;
- productivity is boosted and transformative changes required by the European Green Deal are facilitated, leaving no one behind, thanks to enhanced digitalisation and flows of existing and new knowledge, solutions and skills among actors and communities.

This destination will support R&I activities in complementarity with the European Partnership on Agriculture of Data and those that continue for the Sustainable Blue Economy Partnership. To maximise the impacts of R&I, international cooperation and the integration of social sciences and humanities (SSH) disciplines are encouraged.

To ensure coordination at European and global levels and effective dissemination of user-driven Earth intelligence solutions to inform decisions and accelerate action on global environmental challenges, support will be continued for the annual subscription of the GEO secretariat.

R&I activities supporting digital and data-based innovation under Cluster 6 will complement activities supported by Cluster 4 (Digital, Industry and Space) and the Digital Europe Programme, bringing benefits for citizens, businesses, researchers, the environment, society at large and policymakers. Synergies will be carefully considered in particular with Copernicus, the Common European Data Spaces and the Destination Earth programme.

The destination will ensure synergies with the CAP instruments aimed at strengthening AKIS in all Member States across the EU, thereby deliver on the cross-cutting objective to foster co-creation and sharing of knowledge and innovation. Strong interaction between and integration of AKIS actors is key to this end, hence the CSA type of activities will prevail. The interactive innovation model will be supported via a reinforced multi-actor approach mainstreamed across Cluster 6.

Innovating with governance models and supporting policies

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-03-GOVERNANCE-01: Improving analytical capacity and understanding of the bargaining power and interactions of farmers with the operators of the value chains

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁴⁴.</p>

Expected Outcome: Reinforcing the position of farmers in the value chain is a key objective of the common agricultural policy (CAP). In line with this CAP objective, and other related policies²⁴⁵, the successful proposal will enhance knowledge and analytical tools useful to the development and implementation of effective governance and policy mixes aimed at improving the functioning of EU agriculture and food value chains (hereafter ‘value chains’). The successful proposal will contribute to support value chains that generate a fair income to farmers and create enabling conditions for the transition to sustainable, resilient and competitive farming systems.

Project results are expected to contribute to all of the following expected outcomes:

- the capacity of the research community to analyse and model the EU agricultural and food sectors, their market structures, and the formation, transmission and distribution of costs, prices, risks and economic values along value chains is enhanced; likewise,

²⁴⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁴⁵ e.g., the EU Directive 2019/633 on unfair trading practices in business-to-business relationships in the agricultural and food supply chain, and the EU Regulation 1308/2013 establishing a common organisation of the markets in agricultural products.

policymakers, farmers and other value chain operators have a better understanding of the functioning of value chains and the formation, transmission and distribution of costs, prices, risks and economic values along them;

- policymakers at EU, national and local level have a better understanding of the impacts of policies on the functioning of value chains, and are therefore better equipped to design and support the uptake of existing and future policy tools strengthening farmers' position in them;
- farmers and consumers benefit from improved policy mixes, fair business interactions and tools reinforcing the bargaining power of farmers with upstream and downstream operators and supporting more sustainable, transparent and resilient value chains.

Scope: The understanding and the capacity to analyse the functioning of agriculture and food sectors, value chains ²⁴⁶ and market structures remain incomplete and oversimplified. This contributes to a knowledge gap on the relations between farm production costs and price transmission, from input prices faced by farmers to food prices faced by consumers. Market and value chain conditions and dynamics affecting farmers' bargaining power are important drivers of farmers decision-making and income. They define the prices of the inputs and services bought and the commodity and non-commodity outputs sold by farmers. Hence, they contribute to the choices of production and business model, investments, and to the adoption of sustainable practices. A better understanding of the composition and functioning of value chains and market settings, in a granular and comprehensive way, would support accurate assessments of the socio-economic impacts of policies and business operations. It would also support the development of effective, evidence-based policies and business strategies adapted to the diverse conditions faced by farmers and consumers that will improve the functioning of the agricultural and food markets.

Proposals should:

- provide an analytical framework and tools capturing the complexity and heterogeneity of EU value chain structures, in particular relative to:
 - o their length (number of intermediaries from the input industry to the consumers);
 - o their scale (global, EU, national or local);
 - o the degree and forms of vertical coordination;
 - o the degree and forms of horizontal coordination between farmers;
 - o the degree of concentration of operations at all stages;

²⁴⁶ The agriculture and food value chains encompass all operators from the producers of necessary inputs for agricultural production to the consumers, including farmers, food and bio-based industries (including processing), retail, wholesale, food service (including public procurement), as well as the suppliers of inputs and services such as seeds, pesticides, fertilisers, energy, machinery, packaging, repair, transport, finance, advice, and logistics.

- o the degree of product (quality) differentiation.
- the framework should include a consolidated conceptualisation such that it can be adapted to represent the diversity of cases within and between sectors. The framework should also be sustained with empirical evidence and data to the maximum extent;
- apply the developed analytical framework and tools to empirically model production costs, price formation, price transmission, risk, cost and economic value distributions, and profit margins along selected value chains, and to characterise sources of market failures and occurrence of unfair trading practices. Proposals should consider different economic contexts (e.g., high/low prices, different patterns of price volatilities, etc.);
- develop and/or improve adequate indicators and collect the necessary data to improve the assessment of farmers bargaining power with upstream and downstream operators of value chains in analytical tools and models;
- explore, characterise, and analyse the interactions between value chain operators and the characteristics of value chains affecting farmers' bargaining and decision-making power, in particular on the type of farm business and structural changes (e.g., farm size, legal form, etc.). The proposed activities should include the analysis of the transaction relationships between farmers and input suppliers, farmers and service providers, and farmers and buyers of agricultural products. Among others, this work should analyse the types of contracts, provisions, clauses, standards, indications and calculations of prices and volumes, and how economic value, costs, and risks are shared among the operators. Proposals are encouraged to analyse whether farmers' bargaining and decision-making power is affected by socioeconomic characteristics (e.g., gender, age, etc.).
- explore existing and/or propose new policy and business solutions and tools to reinforce farmers bargaining power in value chains. Identify good practices (governance, awareness raising, etc.) for their successful implementation and uptake. Among the possible solutions, proposals should explore:
 - o coordination approaches between farmers and/or between farmers and other value chain operators (e.g., form, size, contractual agreements, capacity building, etc.);
 - o tools (e.g., data tools, innovative technologies) to increase market transparency and the accessibility and use of information. This should contribute to better inform farmers and consumers on the distribution of costs, prices, economic value, and risks along value chains and improve the fairness and efficiency of agriculture and food markets.

Proposals should develop dissemination materials (e.g., policy briefs, research findings briefs, audio or visual presentations, etc.) summarising the results of key deliverables to facilitate the uptake of R&I outputs by decisionmakers in policy or business contexts.

Proposals should capitalise on existing relevant research findings and tools. Proposals should also ensure synergies with other relevant EU-funded studies, projects, initiatives, and processes ²⁴⁷.

This topic should involve the effective contribution of Social Sciences and Humanities (SSH) disciplines.

HORIZON-CL6-2025-03-GOVERNANCE-02: Upscaling innovative payments to support farmers in the delivery of agri-environment-climate public goods

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply: The proposals must use the multi-actor approach. See definition of the multi-actor approach in the introduction to this Work Programme part.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: In line with the climate action and biodiversity objectives of the Green Deal and the common agricultural policy (CAP), the successful proposal will contribute to the development and uptake of effective governance and competitive business models. This will be based on the upscaling of innovative payment mechanisms with result-based and/or collective and/or spatially coordinated approaches supporting the provision of environmental services by farmers and the transition to more resilient and sustainable farming systems. The

²⁴⁷ e.g., producer organisations operational programmes, the EU Agri-Food Chain Observatory, fi-compass, etc.

successful proposal will contribute to the impact of this destination on just societal transformation, community empowerment and societal participation in support to the green transition.

Project results are expected to contribute to all of the following expected outcomes:

- policymakers, businesses, farmers, and other relevant stakeholders have a clear understanding of the role environmental services play in a flourishing society, and engage in payment for environmental services schemes with result-based and/or collective and/or spatially coordinated approaches with the governance perspective of ensuring long-term financing capacity at scale;
- policymakers, businesses, farmers, and other relevant stakeholders have improved knowledge and innovative tools to develop, implement and upscale payment for environmental services schemes with result-based and/or collective and/or spatially coordinated approaches adapted to the diverse contexts. Farmers and businesses from diverse farming contexts widely participate on a long-term basis in innovative payment for environmental services schemes with result-based and/or collective and/or spatially coordinated approaches;
- society at large benefit from more targeted support towards the delivery of agri-environment-climate public goods with positive social, economic, biodiversity and climate outcomes.

Scope: Payments for environmental services are economic incentives recognizing and supporting farmers for voluntary interventions that contribute to the provision of public goods²⁴⁸. Research and practical experiences from a diversity of initiatives from the public and private sector, provided evidence and guidance on cost-effective and well-contextualised design to support practitioners. Implementing more result-based, collective or spatially coordinated approaches in payment conditionality rules are among the key recommendations to best achieve impacts. While some Member States integrated such approaches in the design of some eco-schemes and agri-environment-climate measures in the CAP, important barriers to the upscaling and long-term implementation remain to be overcome. Building sufficient institutional, monitoring, funding and financing capacity are necessary to increase synergies between economic viability, environmental effectiveness and longevity. This strengthened capacity would support the achievement of more sustainable and positive social, economic, climate and biodiversity outcomes effectively contributing to the Green Deal objectives. Mobilising more the private sector in those innovative payment for environmental services schemes would contribute to address those barriers.

Proposals should:

²⁴⁸ e.g., climate change mitigation, soil functionality, biodiversity, water quality and water availability preservation and restoration, resilience to extreme weather events, animal welfare, etc.

- develop and/or improve, test, pilot and evaluate payment for environmental services schemes with result-based and/or collective and/or spatially coordinated approaches in real-life conditions considering a diversity of farming contexts;
- put a special focus on mobilising private funding (e.g., value chain approaches, market-based instruments, crowdfunding, bottom-up approaches, etc.) and assessing the social and economic implications of the schemes with the perspective of long-term implementation and financial viability under different scenarios and socio-economic contexts;
- based on an analysis of the role of agriculture and food value chains in supporting and valorising farmers' provision of environmental services, develop and/or improve approaches supporting a just and fair remuneration of farmers for these services;
- develop and/or improve and apply robust and cost-effective monitoring of the environmental services provided by farmers;
- identify barriers and enablers for the implementation and upscaling of payment for environmental services schemes with result-based and/or collective and/or spatially coordinated approaches and propose effective solutions to address them. Special attention should be given to not repeat but build on and complement the state-of-the art;
- support capacity building, training, reskilling, and education, in particular on the technical, financial, legal and administrative implications of contractual arrangements, enabling farmers and other involved practitioners, including the private sector, to implement the proposed solutions.

Proposals should ensure complementarities with ongoing relevant Horizon Europe projects including from the Mission “A Soil Deal for Europe” and capitalise on existing relevant research findings and tools. Proposals should also ensure synergies with other relevant LIFE projects, EU-funded studies, pilot projects, and processes ²⁴⁹.

Proposals should include a dedicated task, appropriate resources and a plan on how they will collaborate with other projects selected under this topic (e.g., by participating in joint activities, workshops, as well as common communication and dissemination activities, etc.).

The JRC participation could involve contributing to the testing of payment for environmental services schemes via experiments.

Proposals must implement the ‘multi-actor approach’, with a consortium based on a balanced mix of actors with complementary knowledge, including farmers, researchers, and businesses. Involvement of SMEs, in particular of farmers, for developing, improving, testing and/or piloting the proposed solutions is strongly encouraged. As an option, proposals may provide financial support to third parties (FSTP) to facilitate the engagement of SMEs in testing and/or piloting the proposed solutions. A maximum of 10% of the EU funding should be

²⁴⁹ e.g., rural development programmes, EU-wide certification scheme for carbon removals, etc.

allocated to this purpose. In this case, consortia need to define the selection process of entities, for which financial support may be granted.

This topic should involve the effective contribution of Social Sciences and Humanities (SSH) disciplines.

HORIZON-CL6-2025-03-GOVERNANCE-03: Boosting the attractiveness of agriculture and the connection between the farming community and society

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁵⁰.</p>

Expected Outcome: In line with the objectives of the Vision for Agriculture and food and the common agricultural policy (CAP), to support generational renewal, to promote fair jobs and social inclusion for farmers, the successful proposal will support the impact of this Destination related to the development of innovative governance models by providing strong evidence-informed knowledge and analytical capacity to support the development and implementation of effective policies, in particular the CAP post 2027.

Project results are expected to contribute to all of the following expected outcomes:

- the perception of and the communication on agriculture as economic activity and profession are assessed and enhanced to boost the attractiveness of the sector for new

²⁵⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

entrants and young farmers and the connection between farming community and society is improved;

- knowledge on the socio-economic and other factors influencing the attractiveness of farming within the society, in particular among the young generation, is improved and disseminated to local, national and EU policymakers, business operators and other relevant actors;
- new strategies, solutions and practices to enhance the farming sector attractiveness are widely used by diverse actors, including farmers, businesses, policymakers, local or regional contracting authorities and society at large.

Scope: With the current challenges of climate change, biodiversity loss, resource scarcity, new working patterns and consumers' behaviour changes, there is the need for a more innovative, sustainable farming in the EU. However, the EU's farming sector is facing a steady decline of workforce in the last fifteen years, also depending on demographic challenges such as an ageing farming population. Thus, the need for attracting and supporting young and new farmers is critical. The motivations, commercial nature and business models for farming have changed due to the recent climate and environmental challenges and to the new opportunities offered by the technological and digital innovations, but at the same time, due to social and economic factors.

While it is a vital sector, farming still remains largely poorly understood by society, subject to many myths and misconceptions. To develop and implement effective policies and business strategies that enhance the attractiveness of the sector, it is essential to better understand how the perception of farming by society is determined by socio-economic and other factors (for example, but not limited to: income, labour conditions, land markets, use of sustainable practices, mental health, social wellbeing, social, economic and gender inequalities, generational renewal, etc...). Sound governance and policies creating an attractive environment, inclusive fair job conditions for farmers will enable the transition to more resilient and sustainable farming systems.

New interdisciplinary knowledge also stemming from disciplines such as social sciences and humanities is necessary to explore and better understand the ways in which agriculture is expressed and thought about, and its changing relationship with society. Activities under this topic should unlock the potential of cultural and creative industries to improve the communication about agriculture to society.

Proposals should:

- improve understanding of the socio-economic and other factors and conditions influencing attractiveness of farming as an economic activity and profession, and how farmers see and project themselves in the future of farming;

- examine the factors that influence the decision to become or to leave the profession of farm worker or farm owner in diverse regions across Europe, incorporating storytelling and narrative techniques;
- explore and analyse how farmers' interactions vary within the farming community and with the broad society based on different factors (e.g. historical, sectorial, territorial, farm size, age, education, gender, etc) and how those factors influence their social and economic roles;
- explore and assess the perception of and communication on farming across society at large according to different societal actors (individuals or groups that play a significant role in shaping and influencing societal norms, values, and institutions) and economic actors (individuals, businesses, or organizations that participate in economic activities, such as production, consumption, and distribution of goods and services) across the EU with different perspectives (e.g. historical, sectorial, territorial, size, age, education, gender, etc);
- map existing agricultural education and training programmes across Europe and provide recommendations, based on the evidence collected, on how they can be designed to appeal to a diverse range of individuals;
- improve societal perception of farming through the mobilisation of and cooperation between cultural and creative industries (CCIs);
- map, assess, promote existing and propose new solutions, good practices, initiatives, approaches, that aim at improving the attractiveness of farming sector and the connection between the farming community and society, and widely disseminate to policymakers, farmers, businesses and other relevant actors.

Proposals should support collaborative and interdisciplinary work. Thus, proposals should involve the effective contribution of Social Sciences and Humanities (SSH) disciplines, such as sociology, geography, demography, communication, behavioural science, anthropology or education. Proposals may involve digital media, traditional media, arts, marketing, cultural disciplines (and beyond) to contribute to improving attractiveness of the farming sector. Participatory foresight methods are encouraged.

HORIZON-CL6-2025-03-GOVERNANCE-04: Operationalisation of bioeconomy sustainability principles

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a

	proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following additional eligibility criteria apply: The proposals must use the multi-actor approach. See definition of the multi-actor approach in the introduction to this Work Programme part.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁵¹.</p>

Expected Outcome: In line with the European Green Deal, the EU's climate targets for 2030 and 2050 and the bioeconomy strategy vision for an economic system that acts within planetary and social boundaries, the successful proposal will contribute to the impact of this Destination on effective policy mixes and multi-level governance to enable a just sustainable transition for all.

Project results are expected to contribute to all of the following expected outcomes:

- new and improved knowledge and better understanding of how bioeconomy sustainability principles for food and other bio-based value chains can be operationalised (e.g. cascading use of biomass or the food-first principle) in different environmental, social and economic contexts. Clarity on future projected sectoral availability and demand for biomass and biomass types will render improved clarity and transparency for businesses and consumers, thus enabling better-informed choices and policy- and decision making;
- new knowledge of how social sustainability, particularly related to distributional (international, intra-national and inter-regional) and inter-generational justice can be captured and operationalised in Bioeconomy Monitoring Systems;

²⁵¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- increased deployment of bioeconomies across Europe considering environmental, social and economic sustainability;
- improve knowledge of the impact of the bioeconomy on ecosystems, and provide options on how to protect /restore ecosystems, contribute to the reduction of biodiversity loss and to climate action, while developing the bioeconomy.

Scope: Bioeconomy²⁵² is a place-based policy framework. The application of sustainability principles in concrete contexts therefore depends on available (environmental and human) assets, challenges and priorities, as well as access to logistics, finance and infrastructure. It is therefore important that sustainability principles are developed both with high clarity of their intention as well as sufficient flexibility to enable implementation in differing contexts. In particular, it is important to assess the impact of bioeconomy on ecosystems and to develop options on how to protect /restore ecosystems while developing bioeconomy. The sustainability principles must be able to give clear direction how to manage situations of conflicting objectives, and ensure that no unintended environmental, economic social consequences follow, preventing unsustainable use of biomass.

Successful proposals are expected to:

- develop or improve the sustainability assessment of bio-based and food value chains, both from land and aquatic systems and their related value webs to increase transparency for businesses and consumers, enabling better informed choices;
- analyse the performance of bioeconomy innovation ecosystems with regard to social, economic, and environmental sustainability, and demonstrate their long-term feasibility (e.g. with regard to infrastructure, climate adaptation, biodiversity and ecosystem protection and restoration). Demonstrate the applicability of bioeconomy sustainability principles in regional case studies, based on the concept of Regional Innovation Valleys for Bioeconomy and Food Systems²⁵³;
- identify and address challenges for the EU, Member States and regions (e.g. public authorities) to deploy sustainability principles and providing policy recommendations to overcome them.

The possible participation of the JRC in the project would ensure that the approach proposed is compatible with the bioeconomy working streams of the Knowledge Centre for Bioeconomy.

International cooperation is encouraged.

²⁵² See definition: European Commission, Directorate-General for Research and Innovation, A sustainable bioeconomy for Europe – Strengthening the connection between economy, society and the environment – Updated bioeconomy strategy, Publications Office, 2018, <https://data.europa.eu/doi/10.2777/792130>

²⁵³ [Concept of Regional Innovation Valleys for Bioeconomy and Food Systems](#)

This topic should involve the effective contribution of Social Sciences and Humanities (SSH) disciplines, including gender studies²⁵⁴. Proposals must implement the 'multi-actor approach', with a consortium based on a balanced mix of relevant actors with complementary knowledge to achieve the objectives of the project, including for instance relevant rural actors.

Proposals should include a dedicated task, appropriate resources and a plan on how they will seek synergies with other with other EU programmes and funding instruments initiatives, and ensure complementarities with relevant activities carried out or to be carried out under other initiatives in Horizon Europe (e.g. funded projects under past ZEROPOLLUTION and CIRCBIO Cluster 6 calls).

Proposals should build on the findings of the “Global Resources Outlook ²⁵⁵” 2024 from the International Resource Panel.

HORIZON-CL6-2025-03-GOVERNANCE-05: Exploring options to resolve land and sea use competition

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 9.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the

²⁵⁴ See overview of gender and EU bioeconomy: [Infografías COOPID AP](#). See overview of gender in bioeconomy literature: [Gender and women in scientific literature on bioeconomy: A systematic review - ScienceDirect](#)

²⁵⁵ [Global Resources Outlook 2024 | UNEP - UN Environment Programme](#)

	Research and Training Programme of the European Atomic Energy Community (2021-2025) ²⁵⁶ .
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Expected Outcome: In line with the European Green Deal, the EU's climate and biodiversity targets for 2030 and 2050 and the bioeconomy strategy vision for an economic system that acts within planetary and social boundaries, the successful proposal will contribute to the impact of this Destination on effective policy mixes and multi-level governance to enable a just sustainable transition for all.

Project results are expected to contribute to all of the following expected outcomes:

- identify direct and indirect implications of current and future regional, national and EU policies and targets on land and sea and biomass use that are relevant in the regional context (more than one region);
- further knowledge of existing and emerging trade-offs across environmental objectives (including climate mitigation and adaptation, and protection and restoration of biodiversity) and also between social and economic objectives in different regional ecological, economic and societal contexts;
- further development of deliberation tools (e.g. software tools) that will support better-informed policy- and decision-making processes on a national and regional level that comprehensively assess the European Green Deal related policy domains²⁵⁷.

Scope: A sustainable and circular bioeconomy relies on a management guaranteeing the preservation and restoration of biodiversity and healthy ecosystems while providing sufficient biomass for the production of food, materials and energy required for peoples' wellbeing. On one hand we see a decline of biodiversity, a gap in ecosystem carbon sequestration or lacking capacity of the biosphere to absorb pollutants; on the other hand the increasing competition of biomass use between food, materials, and energy indicates a potential sustainable biomass gap in Europe²⁵⁸. Projections indicate that this sustainable biomass gap could be exacerbated in the decades to come. To anticipate potential areas of conflicts and to develop holistic and coherent policy packages on biomass and land and sea uses requires tools that can inform policy makers how environmental, economic and social objectives can be met based on the available sustainable biomass, in order to close the biomass gap while assessing and minimizing the environmental, economic and wider societal impact and considering social justice and equality aspects on local, regional and EU levels. The Joint Research Centre is working on a deliberation tool on 'Integrated Bioeconomy Land Use Assessment' (IBLUA)²⁵⁹

²⁵⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁵⁷ [Report COM/2022/283: EU Bioeconomy Strategy Progress Report - European Bioeconomy policy: stocktaking and future developments | Knowledge for policy \(europa.eu\)](#)

²⁵⁸ [The European Biomass Puzzle — European Environment Agency \(europa.eu\)](#)

²⁵⁹ [Integrated bioeconomy land use assessment: Land system responses to bioeconomy-related policies | Knowledge for policy \(europa.eu\)](#)

at the European level. However, an assessment at such aggregate rough level is not sufficient for informing policies at national and regional level. This topic is encouraged to build upon the JRC's tools developed for the European-level approach and assessment to improve context-specific deliberation tools that can assess social and economic outcomes of policies at regional level and support regional policy makers in finding best context-specific policies related to land and sea and biomass.

Successful proposals are expected to:

- develop tools (including methodologies and processes) for national and regional policy- and decision-makers to carry out integrated bioeconomy land and sea assessments, with the objective to minimize the 'land/sea footprint' and provide different land and sea biomass uses solutions, considering their feasibility, viability, and societal desirability (e.g. region specific). The assessment shall consider natural, semi-natural, and managed (agricultural and forestry, fisheries and aquaculture) ecosystems and the impacts of land/sea use on ecosystem conditions, biodiversity and supply of ecosystem services and interlinkages, considering the System of Environmental Economic Accounting set of indicators and the JRC's EU-wide ecosystem condition assessment;
- assess and develop integrated and coherent policy objectives to improve land and sea biomass use in national and regional contexts, considering the inclusive approaches to developing a wide range of policy narratives (e.g. objectives) pursued by the JRC in the EU-level assessment (i.e. IBLUA). The different narratives described qualitatively will be quantitatively represented (e.g. reporting relevant social, economic and environmental indicators) in the deliberation tool, which should be able to capture different configurations of land and sea and biomass use, including dietary needs, energy uses, bio-based products expansion, and carbon farming; considering the challenges to land/sea ownership (e.g. private vs public) and the options stem from the tool to resolve them;
- demonstrate how the deliberation tool could be implemented in a network of regions covering different socio-economic situations and climate/ecological zones in the EU and associated countries to improve just and sustainable land/sea management, food security and circular biomass uses.

The participation of the JRC in the project is encouraged to ensure that the approach proposed is compatible with the bioeconomy working streams of the Knowledge Centre for Bioeconomy and with the various JRC's tools and methodologies developed for the EU bioeconomy assessment.

Proposals should include a dedicated task, appropriate resources and a plan on how they will collaborate with other projects funded under this topic and ensure complementarities with relevant activities carried out under other initiatives in Horizon Europe, including the Horizon Europe Mission "A Soil Deal for Europe", and seek synergies with other EU programmes and funding instruments.

Proposals should build on the findings of the “Global Resources Outlook²⁶⁰” 2024 from the International Resource Panel. Proposals are encouraged to consider, where relevant, the services offered by European research infrastructures. The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website.

HORIZON-CL6-2025-03-GOVERNANCE-06: Strengthening and connecting bioeconomy networks

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.40 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.40 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁶¹

Expected Outcome: In line with the European Green Deal, the EU’s climate targets for 2030 and 2050 and the bioeconomy strategy vision for an economic system that acts within planetary and social boundaries, the successful proposal will contribute to the impact of this Destination on effective policy mixes and multi-level governance to enable a just sustainable transition for all.

Project results are expected to contribute to all of the following expected outcomes:

- better understanding and increased awareness of the bioeconomy for a fast deployment of bioeconomy potential benefits and solutions, across the Europe, in rural and coastal

²⁶⁰ [Global Resources Outlook 2024 | UNEP - UN Environment Programme](#)

²⁶¹ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

areas, cities, communities and governments, and in economic sectors among businesses, citizens, and especially young people;

- better coordination of European bioeconomy initiatives, including those funded by EU R&I framework programmes, and of relevant networks, with a view to strengthening knowledge exchange and synthesis on the bioeconomy for an increased uptake of bioeconomy actions and solutions in businesses, in education and in policy, and to accelerate the achievement of the EU bioeconomy strategy objectives with respect to social, economic and environmental sustainability, including climate action as well as biodiversity and ecosystem protection and restoration;
- enhanced networking and cooperation on European bioeconomy between relevant actors and stakeholders at European, national and regional levels, as well as outreach and support to relevant international networks and initiatives to foster fast deployment of bioeconomy and biotechnologies actions and solutions;
- increased buy-in from all relevant actors and stakeholders to collaborate and act as bioeconomy changemakers: including disadvantaged communities, people in vulnerable situations, women, and youth, but also underrepresented stakeholders like NGOs and investors, in and across sectors, communities, regions, and ministries.

Scope: There is a need to strengthen a Europe - wide network for the bioeconomy to exchange knowledge and to stimulate mutual learning of bioeconomy initiatives and solutions, on the transition to a sustainable and circular bioeconomy, and on its governance – in view of the review of the current EU bioeconomy strategy. Although some platforms for networking and cooperation on the bioeconomy exist, more can be done to strengthen relationship building across European sectors, stakeholder groups, generations, languages, levels of governance, or professions and advance the cross-cutting insights that drive bioeconomy solutions and improved governance. Barriers including insufficient understanding of the bioeconomy concept and its potential, language, limited capacities to engage in knowledge exchange, unsuitable engagement formats, or a lack of mutual understanding are some of the factors that contribute to this situation.

Efforts to strengthen and connect bioeconomy networks across Member States and Associated Countries will foster interconnectedness amongst stakeholders, across sectors, regions and disciplines, to strengthen policy coherence and implementation. It will accelerate relation building and transfer of knowledge on bioeconomy, help the development and implementation of the EU bioeconomy strategy in Europe, and contribute to scale-up place-based solutions that address EU challenges in different regional contexts.

Successful proposals are expected to:

- establish and develop an EU-wide platform (one-stop shop, multilingual) for networking and engagement on the bioeconomy, that brings together EU practitioners, researchers, investors, policy makers and education providers,

- support of international research and innovation bioeconomy networks and initiatives (e.g. International Bioeconomy Forum or International Advisory Council on Global Bioeconomy) to foster international research collaboration and Science-to-Policy interfaces for bioeconomy;
- develop communication strategies and tools, and organise events to inform EU, national and regional actors and stakeholders about bioeconomy deployment, successful bioeconomy initiatives and solutions (i.e., open access to industrial demonstrations sites), including from relevant EU-funded R&I projects, and other EU programmes (i.e., Interreg: European Territorial Co-operation);
- stimulate dialogue on bioeconomy solutions and initiatives, to build relations, exchange knowledge and support mutual learning, across European sectors, stakeholder groups, generations, languages, levels of governance, or professions; align these activities with needs under the EU bioeconomy strategy and related policies including on climate and biodiversity;
- implement lean business models to manage the platform (e.g. secretariat, operations, events) and its activities in a sustainable manner beyond the end of the project using public and private funding;
- liaise and collaborate with bioeconomy education institutes for improved skills development initiatives and networks to develop and deploy innovative interactive bioeconomy education material in support of both the informal and formal education at all levels;
- engage and train investors on the European bioeconomy to foster investment in bioeconomy sectors.

Proposals are encouraged to work together with relevant initiatives including those of the European Commission's Joint Research Centre (Knowledge Centre on Bioeconomy, Bioeconomy Monitoring System), the Circular Biobased Europe Joint Undertaking, the European Circular Economy Stakeholder Platform, and BIOEAST. Proposals are expected to build on results from EU R&I projects including BioVoices and ShapingBio.

HORIZON-CL6-2025-03-GOVERNANCE-07: Strengthening the European Research Area by enhancing the bioeconomy research and innovation ecosystem in BIOEAST countries

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a

	proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: The evaluation committee will be composed partially by representatives of EU institutions.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁶² .

Expected Outcome: In line with the European Green Deal priorities, the EU's climate targets for 2030 and 2050 and the bioeconomy strategy vision of an economic system that acts within environmental and social boundaries, the successful proposal will contribute to the impact of this Destination on just sustainable transition for all by assessing research and innovation capacities in the bioeconomy for improved innovation ecosystems and aligned national R&I agendas in BIOEAST²⁶³ countries, Ukraine, Moldova, and the Western Balkans.

Project results are expected to contribute to all of the following expected outcomes:

- improved research and innovation capacities in the bioeconomy, by strengthening soil and water resilience, enhancing food systems security, and promoting sustainable biomass valorisation through the adaptation of modern biorefinery concepts and biomanufacturing techniques;
- improved coordination and collaboration among stakeholders within the macro-region to address regional challenges, to coordinate research efforts at local, national, macro-regional and European levels, fostering a shared vision for climate-neutrality and an inclusive, sustainable and circular bioeconomy;

²⁶² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁶³ www.bioeast.eu The Central-Eastern European Initiative for Knowledge-based Agriculture, Aquaculture and Forestry in the Bioeconomy – BIOEAST – offers a common political commitment and shared strategic research and innovation framework for working towards sustainable bioeconomies in the Central and Eastern European (CEE) countries (Czech Republic, Hungary, Poland, Slovakia, Bulgaria, Croatia, Latvia, Lithuania, Estonia, Romania, Slovenia).

- strengthened macro-region's research and innovation ecosystem through integration of public and private stakeholders that lead to tangible projects which drive fair and sustainable socio-economic development and environmental sustainability, including contribution to the reduction of biodiversity loss and to climate action;
- strengthened European Research Area by outlining a roadmap and identifying emerging thematic areas for research and innovation cooperation through a multidisciplinary approach, incorporating, among other fields, environmental science, ecology, and biodiversity.

Scope: This topic targets proposals for the alignment of research and innovation agendas for sustainable natural resources, with a particular attention to soil and water resilience, food systems security, and sustainable biomass valorisation in the bioeconomy. The primary goal is to enhance research and innovation capacities, while fostering ownership in BIOEAST and EU accession countries, with special focus on Ukraine, Moldova, and Western Balkans. Based on the BIOEAST Initiative involvement and format, the proposal should be able to mobilise the research funders and managers, but also thematic networks from the macro-region. For establishing the knowledge transfer and good cooperation, consortia should include entities from EU Member States with significant experience of managing joint research initiatives and partnerships. Collaboration with the BIOEAST Initiative is expected to be instrumental in achieving the outcomes of the project.

Proposals should demonstrate the potential for impact and scalability of their proposed activities. Proposals should collaborate and ensure synergies with ongoing and past projects and initiatives on bioeconomy governance²⁶⁴, and collaborate with the Circular Bio-based Europe (CBE) JU and its widening strategy. The successful proposal will contribute to:

- engage ministries, research funders, and managers as well as thematic networks, to mobilise resources and create synergies between European, national and regional level funds;
- establish frameworks for communication and coordination among European and national bioeconomy related programme owners and managers to reduce fragmentation;
- enhance long-term cooperation in the bioeconomy to amplify research impact on socio-economic development while supporting widening and the EU enlargement process;
- address the region's geopolitical, research, and innovation challenges by achieving coherence across research, policy, and funding instruments in the bioeconomy. This includes fostering climate neutrality, contributing to the reduction of biodiversity loss, promoting an inclusive, circular, sustainable bioeconomy through an integrated macro-regional approach to research and innovation.

²⁶⁴ BIOEASTsUP, BOOST4BIOEAST

Deploying and adding value to environmental observations

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-03-GOVERNANCE-08: Effective environmental observing systems and associated governance

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering different use cases, grants will be awarded not only in the order of ranking, but at least also to one proposal that is the highest ranked within Area A and at least also to one proposal that is the highest ranked within Area B, provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁶⁵.</p>

²⁶⁵ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link:

Expected Outcome: Successful proposals will contribute to the expected impact of this Destination on more accessible and interoperable environmental observations.

Project results are expected to contribute to all of the following expected outcomes:

- more cost-effective and user-friendly environmental observing systems serving the needs of science, as well as policy and decision makers at various levels, based on enhanced usability, accessibility, effectivity, interoperability and exploitation of environmental observations;
- improved international cooperation in support of EU and global climate and environmental monitoring policies and reporting obligations;
- more sustainable and resilient environmental observing systems based on advanced governance models and well-informed decision-making by national, European and international actors.

Scope: Efficiency and cost-effectiveness of observing systems will play a crucial role in global initiatives such as the WMO Global Greenhouse Gas Watch, or GEO initiatives and flagships, which are needed to support EU and international policies, like for example the Paris Agreement, the Montreal Protocol and its Kigali Agreement, the European Climate Law, the EU climate adaptation strategy, the EU's F-gas Regulation²⁶⁶, or the Regulation on ozone-depleting substances.

Proposals are expected to exploit the latest digital technologies (e.g. Artificial Intelligence, digital twins, IoT) and science (e.g. data assimilation and analysis, or models) to develop innovative, generic, quantitative, cost-effective and user-friendly tools to optimize current and future/emerging orbital (baseline and small satellite constellations) and non-orbital observing systems (e.g. autonomous systems, manned and unmanned aerial vehicles (drones), citizen science networks) and their combinations from a performance and investment point of view, using approaches like Observing System Experiments (OSEs) and Observing System Simulation Experiments (OSSEs).

Proposed activities should identify technical, as well as socio-economic, cultural, geopolitical, or other barriers on usability, accessibility (including at international level), effectivity, interoperability and exploitation of environmental observing systems, and propose and support the implementation of innovative, efficient and pragmatic solutions to overcome them. Towards this end, the inclusion of social sciences and humanities (SSH) disciplines is encouraged.

Innovative decision-making approaches should be investigated to support and facilitate international governance and negotiations at European and global level, as well as national actors on sustainable and resilient environmental observations matters, regarding investments,

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁶⁶

Regulation (EU) 2024/573, <http://data.europa.eu/eli/reg/2024/573/oj>.

operations, accessibility, gaps and innovation. Inter-operability with European data spaces and other existing data infrastructures should be considered.

The approaches should be demonstrated in the context of one of the following specific use case areas (and proposals should identify which use case area they are addressing):

- Area A: monitoring global anthropogenic and natural greenhouse gas emissions and sinks, in support of the Paris Agreement;
- Area B: ozone depleting substances and F-Gases, in support of the Montreal Protocol.

Proposals are expected to demonstrate a good understanding of data requirements for policy implementation. The optimisation of the observing systems should identify and address in an iterative process the needs of well identified user groups, like for example modelling communities, Copernicus, Destination Earth, international organisations, and regional or national authorities.

Tools and approach should be flexible enough to be applied to other observing systems and examples. The project is expected to benefit from and leverage underlying work of ESA, EUMETSAT, Copernicus, or European Research Infrastructures (ICOS, ACTRIS, etc.).

International cooperation is encouraged.

HORIZON-CL6-2025-03-GOVERNANCE-09: Delivering Earth Intelligence to accelerate the green and digital transition

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome: Successful proposals will contribute to the expected impact of this Destination on more accessible and interoperable environmental observations.

Project results are expected to contribute to all of the following expected outcomes:

- accelerate the green and digital transition of economic sectors through the development of end-user applications and decision support systems for operationalisation or commercialisation by public or private service providers;
- successful integration and consolidation of European and national GEO²⁶⁷ related activities across the EU Member States and Associated countries, that result in effective and operational contributions to the GEO work programme activities, with a clear path towards uptake in Europe and internationally in support of climate or biodiversity related policies and targets;
- contribute to the EuroGEO²⁶⁸ initiative and support the EC Knowledge Centre on Earth Observation (KCEO) on uptake of Environmental Observations (EO) for EU policy making.

Scope: This action is an application-oriented initiative, responding to the new GEO post-2025 strategy and is aimed at combining and advancing existing European Earth observation services and solutions, that were prototyped under relevant Horizon, Copernicus, and other EU and national projects and initiatives, and scaling them up with end-users and customers towards wide adoption. In support of the European Green Deal targets, the project should develop, test, demonstrate and customise 2 to 3 integrated solutions, using advanced digital technologies like Artificial Intelligence, including generative AI, with a clear path towards operationalisation that should correspond to some of the following selected focus areas of the GEO Post-2025 implementation plan:

- Sustainable Agriculture and Food Security;
- Water Resilience;
- Ecosystems and Biodiversity;
- Carbon Management;
- Disaster Resilience.

The solutions should be co-designed with relevant European users, including local, regional and national governments (such as through the Copernicus National User Forums), and mature business plans should be developed in the project to ensure operational uptake after

²⁶⁷ Group on Earth Observations (GEO, <https://earthobservations.org/>) is an intergovernmental partnership working to improve the availability, access, and use of open Earth observations, including satellite remote sensing and in situ data, to impact policy and decision making in a wide range of sectors.

²⁶⁸ https://research-and-innovation.ec.europa.eu/knowledge-publications-tools-and-data/knowledge-centres-and-data-portals/eurogeo_en

the project, including by public/private procurers or service providers, Copernicus services, or GEO flagships and initiatives.

The activity should leverage European infrastructures and where relevant integrate various remote sensing platforms such as satellites, manned and unmanned aviation (drones). It should further build on and contribute to the existing European digital ecosystem, including different research and service infrastructures, like European data spaces, citizen science initiatives and national, regional, and global databases of in-situ observation, and support their evolution. Clustering and cooperation with other selected projects under this call topic and other relevant projects should be ensured. To this end, proposals should earmark the appropriate resources for coordination activities accordingly in their work plan.

Outreach and training activities are expected to reach the wider European EO community and to support further the upscaling of European/national/sub-national EO services beyond this project and actively promote pan-European synergies. Efforts should be planned for active participation in relevant EuroGEO action groups and workshops as well as for engaging with the Copernicus stakeholder community at European (e.g. Entrusted Entities) and national level (e.g. Copernicus Ambassadors).

HORIZON-CL6-2025-03-GOVERNANCE-10: Improving and integrating polar observation systems in response to user requirements at local, regional, and international level

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>

<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering different regions, grants will be awarded not only in order of ranking but at least also to one proposal that is the highest ranked within region ‘Area A’ and one proposal that is the highest ranked within region ‘Area B’, provided that the applications attain all thresholds.</p>
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Expected Outcome: In line with the Green Deal, the EU climate action and adaptation strategy, the EU Arctic policy²⁶⁹, the Kunming-Montreal Global Biodiversity Framework, the UN 2030 Agenda for sustainable development, successful proposals will contribute to the expected impact of this Destination on more accessible and interoperable environmental observations.

Project results are expected to contribute to all following expected outcomes:

- major European contribution to improved and long-term coordination, governance, sustainability, and resilience of international environmental observing systems relevant for polar regions, to better understand their evolution and role in the climate system and the related impact on biodiversity;
- enhanced usability, accessibility, effectiveness, interoperability, and exploitation of environmental observing and data systems, that help improving Earth System and prediction models, as well as digital twins (the European Digital Twin of the Ocean²⁷⁰ and Destination Earth²⁷¹, and in particular support the evolution of the relevant Copernicus services and the Copernicus Arctic Hub²⁷²;
- support to sustainable management of the polar regions and to decision-making processes for civil society, local or national authorities and stake- and right-holders, as well as EU and international organisations, thereby supporting the related EU policies.

Scope: Long-term, integrated, and sustained observations, building on shared polar observation variables require the development of a “system of systems”. Proposals should address aspects such as carbon cycle, biogeochemistry, sea ice dynamics, ice shelves, freshwater flows changing marine waters and oceanic circulation, atmospheric composition and conditions, subsea permafrost, degradation of marine habitats and biodiversity.

Proposals should demonstrate how they will contribute significantly to:

- improving marine and cryospheric observing systems, in particular the non-space-based components, focussing on their optimisation, integration, coordination and governance,

²⁶⁹ [JOIN\(2021\) 27 final](#), “A stronger EU engagement for a peaceful, sustainable and prosperous Arctic”
²⁷⁰ https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/restore-our-ocean-and-waters/european-digital-twin-ocean-european-dto_en
²⁷¹ <https://destination-earth.eu/>
²⁷² www.arctic.hub.copernicus.eu

building on available technologies or technologies in development, including Artificial Intelligence;

- harmonised, standardised and interoperable of FAIR and CARE Polar Data systems (e.g. data collection, processing and management, incl. also historical data), that are able to provide real time information when necessary; and make them openly available e.g. through the European Marine Observation and Data network (EMODnet)
- supporting the European polar science coordination efforts, including synergies with the objectives of the European Polar Coordination Office (EPCO) and through contributing to the implementation of its work plan;
- the development of strategies on the medium and long term to ensure the sustainability of the observing systems and of the delivery of products and services, taking into account, where relevant, the recommendations of Copernicus polar roadmap²⁷³.

Proposals are expected to focus their scope on only one of the following region ‘areas’:

- Area A: ‘Arctic Ocean and coastal regions’

Proposals focusing on this region need to additionally take the following into account:

- The improvements of the overall observing systems should include community-based monitoring and the local, traditional and indigenous knowledge and where relevant, be co-designed with local communities and Indigenous peoples and with other relevant stake- and right-holders with view to, inter alia, developing products and services needed for adapting to the changing Arctic.

- The action should support the EU Arctic policy and the implementation of the Roadmap for Arctic Observing and Data Systems Sustaining Arctic Observing Networks (SAON-ROADS),²⁷⁴ strengthen Arctic Ocean observations and their coordination, and ensure complementarities with the activities on societal benefit assessment of Arctic observing systems undertaken by the Joint Research Centre.

- Area B: ‘Antarctic shelves and Southern Ocean’

- Proposals focusing on this region should additionally support the establishment of the UN Ocean Decade programme Antarctica InSync²⁷⁵ and contribute to the activities of the Scientific Committee on Antarctic Research (SCAR).

In addition to the chosen regional scope (Area A or Area B), proposals should strengthen the coupling between the polar regions themselves, both for in-situ and satellite observations, for instance through harmonised observing strategies (including cost-effective and user-friendly methods to assess and optimize the design, investment in and operations of polar observing

²⁷³ https://joint-research-centre.ec.europa.eu/jrc-news-and-updates/copernicus-polar-roadmap-eu-satellite-observations-help-respond-emerging-polar-challenges-2024-09-03_en

²⁷⁴ <https://journalhosting.ucalgary.ca/index.php/arctic/article/view/74330>

²⁷⁵ <https://oceandecade.org/actions/antarctica-insync>

systems), harmonised measurement methodologies, the development of Shared Essential Polar Variables, and interoperable, Arctic and Antarctic data systems.

The proposal should also establish collaborations with other relevant projects such as HiAAOS,²⁷⁶ POLARIN,²⁷⁷ and other projects which are part of the EU Polar Cluster²⁷⁸, as well as with relevant European research infrastructures.²⁷⁹

It should also take into consideration and support the valorisation of future Sentinel expansion missions: CIMR, CRISTAL, ROSE-L, with the possibility to co-ordinate with pre-launch campaigns like CRISTALair and CIMRair. This topic is part of a coordination initiative between ESA and the European Commission on Earth System Science, which supports complementary collaborative projects funded on the EC side through Horizon Europe and on the ESA side through the FutureEO programme. Proposals should include dedicated tasks, appropriate resources and a plan on how they will collaborate with relevant ESA activities, including projects selected under the ESA Polar Science Cluster²⁸⁰ and under the Invitation to Tender “ESA Sentinel User Preparation Polar Science Foundational Experiment”²⁸¹.

This action offers an opportunity for Europe to continue playing a leading role in Polar research and knowledge provision at the international level, thereby contributing to the implementation of the G7 Future of the Seas and Ocean Initiative priority on Arctic Ocean Observing,²⁸² GEO Blue Planet Initiative, to the All-Atlantic Ocean Research and Innovation Alliance²⁸³, the Global Ocean Observing System (GOOS), the Global Climate Observing System (GCOS). International cooperation is therefore encouraged, also with view to the 5th International Polar Year (2032-33).

Digital and data technologies as key enablers

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-03-GOVERNANCE-11: Enhancing sustainability and resilience of agriculture, forestry and rural development through digital twins

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately.

²⁷⁶ <https://cordis.europa.eu/project/id/101094621>

²⁷⁷ <https://cordis.europa.eu/project/id/101130949>

²⁷⁸ <https://polarcluster.eu/>

²⁷⁹ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

²⁸⁰ <https://polarsciencecluster.esa.int>

²⁸¹

²⁸² www.g7fsoi.org

²⁸³ www.allatlanticocean.org

<i>project</i>	Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The following additional eligibility criteria apply: The proposals must use the multi-actor approach. See definition of the multi-actor approach in the introduction to this Work Programme part.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5-6 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ²⁸⁴.</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: In line with the European Green Deal, the long-term vision for rural areas and the common agricultural policy (CAP), the successful proposal supports rural communities to benefit from digital twins and strengthen their capacities for the effective and efficient deployment of innovative solutions.

Projects results are expected to contribute to all of the following expected outcomes:

²⁸⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- rural communities, farmers, foresters and other rural actors take advantage of digital twins available to help them meet sustainability and climate adaptation objectives while enhancing rural economy and resilience;
- rural communities are supported by digital and data technologies in exploring different pathways to make villages an attractive place to live for its residents, achieved through strengthened capacities in data-driven decision-making, monitoring and foresight;
- a stronger (digital) rural innovation ecosystem is in place bringing together public and private players and improving attractiveness of rural areas;
- collaboration across different rural actors is fostered through innovative smart governance solutions enabling data and evidence-based policy making.

Scope: Considering that approximately one third of EU citizens live and work in rural areas, it is key to empower rural communities – farmers, foresters and other rural actors - in the transition towards sustainability and resilience so that no one is left behind. In this context, digital twins' technology has gained attention in the past decade because of its potential in addressing challenges across numerous application areas and transforming the way businesses and public administrations operate. Nevertheless, research and innovation related to the use of digital twins in rural areas and relevant key economic sectors, in particular agriculture and forestry, is still limited. Digital twins require further exploration, innovation, testing and demonstration to fully exploit their potential, and reach higher level of maturity and scalability across different territorial and sectoral contexts.

Proposals should:

- design, prototype and test the use of digital twins to improve sustainability and resilience of rural areas and related key sectors (i.e. agriculture, forestry and other relevant sectors). Innovations should be co-created with rural actors to respond to their needs and tested for their feasibility for the territorial development opportunities or challenges that they bring;
- develop a detailed map of the villages in three-dimension employing digital and data technologies. The map should be freely accessible to local authorities, researchers, private companies and other relevant actors to monitor key parameters, test ideas and explore smart(er) and more competitive, sustainable and resilient forms of village development. Where relevant, focus should be given to the planning, monitoring and management of green areas as well as other natural elements in the village that can improve resilience to climate change;
- develop a public web-based platform allowing users to visit the 3D model of the village twins remotely, including through the use of immersive technologies (e.g. Virtual Reality). By integrating various technologies, the platform should allow the user to access information on selected elements of the cultural, historical and/or natural heritage

of the village for promotional purposes while establishing a mechanism for residents to provide feedback on existing and proposed initiatives of village development;

- assess the potential of the investigated digital technologies in promoting forms of collaborative, open and citizen-centric governance;
- measure and assess the costs and benefits of the implementation of digital twins in the rural areas and sectors of application, including enablers and barriers to their uptake and acceptance by the target groups, adequacy and availability of existing public/private funding opportunities, incentives, and new business models supporting their development beyond project duration;
- provide research, business and policy recommendations supporting the successful deployment of the developed digital twins in rural areas and relevant key sectors;
- support training and capacity building for local administrations and rural actors in order to share best practices, develop skills, create and maintain a rural innovation ecosystem enabling them to benefit from the innovations developed for the digital transition in rural areas.

The application of the developed technologies should support the implementation of the smart villages concept oriented towards relatively underdeveloped and remotely located rural areas and communities.

Proposals must implement the 'multi-actor approach', with a consortium based on a balanced mix of relevant actors with complementary knowledge to achieve the objectives of the projects, including for instance relevant rural actors (in particular end-users of the digital twins), universities, research and technology organisations.

Proposals must integrate the gender dimension in the implementation of the activities (e.g. to address gender-specific needs affecting design and testing of the developed technologies, when investigating benefits and limitations, gathering and analysing disaggregated data, in the development of training and communication material as well as research and policy recommendations).

Moreover, proposals should build on results and ensure complementarities with other Horizon 2020/ Europe as well as other relevant EU-funded initiatives and projects (e.g. EU Missions, project that may follow from the topic “HORIZON-CL6-2024-GOVERNANCE-02-01: European Partnership of Agriculture of Data”) and demonstrate adequate planning and use of resources for this purpose.

Proposals may involve financial support to third parties, e.g. to relevant rural actors (including farmers, foresters and other rural businesses), academic researchers, hi-tech start-ups, SMEs, to develop, test or validate the developed digital twins and/or to provide other contributions to achieve the project objectives. A maximum 30% of the EU funding should be allocated to this purpose.

This topic should involve the effective contribution of social sciences and humanities (SSH) disciplines. By integrating relevant SSH expertise (e.g. gender expertise), the successful proposal aims to produce meaningful results that enhance the societal impact of related research activities, while delivering locally-based solutions, engaging residents, rural actors and leading to behavioural changes.

Proposals should cover various biogeographical regions with a balanced coverage reflecting the various pedo-climatic zones in Europe in a representative way and taking into account different types of villages (e.g., different size, remoteness, degree of digital maturity, reliance on economic sectors, exposure and vulnerability to climate change etc.) and farming systems.

The possible contribution of the JRC could involve support in monitoring and modelling activities applied to rural areas, agriculture and forestry.

Proposals should develop diverse practice-oriented dissemination materials (e.g. audiovisual materials, brochures) presenting the digital twins and other R&I solutions developed within the project and feed them into communication channels most consulted by the potential end-users.

Strengthening agricultural knowledge and innovation systems (AKIS)

Proposals are invited against the following topic(s):

HORIZON-CL6-2025-03-GOVERNANCE-12: Increasing knowledge flows to practice within Agricultural Knowledge and Innovation Systems (AKIS) via thematic networks

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: The proposals must use the multi-actor approach. See definition of the multi-actor approach in the introduction to this Work Programme part.</p>
<i>Legal and financial set-up of the Grant</i>	The rules are described in General Annex G. The following exceptions apply:

<i>Agreements</i>	Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁸⁵ .
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Expected Outcome: Successful proposal will support the EU policies related to agriculture, forestry and/or rural areas, including related climate, biodiversity, and other environmental policies. The focus will be on the cross-cutting objective of the common agricultural policy (CAP) to enhance knowledge flows among AKIS²⁸⁶ actors, in particular end-users²⁸⁷. The successful thematic network will support the objective by widely sharing existing and new knowledge in a language and format that is easy to understand and targeted to end-users and by building a more informed, interconnected and engaged AKIS community. It will address the need of end-users for impartial and tailored knowledge that is key to foster the transitions to more competitive, sustainable and resilient agriculture and/or forestry and/or rural areas.

Project results are expected to contribute to all of the following expected outcomes:

- collected practice-oriented research findings, innovative solutions and best practices, are presented in an attractive and understandable way, updated and maintained in the long-term²⁸⁸, and made easily accessible by using the most appropriate channels for end-users;
- practice-ready knowledge and solutions, both generated by research and innovation (R&I)²⁸⁹ and collected from practice, are widely disseminated to, shared and implemented by end-users;
- AKIS at EU and national/regional levels are more effective and the flow of practice-ready knowledge and solutions between end-users and all other relevant AKIS actors is increased across the EU in a geographically balanced way, improving cost-effectiveness of solutions and taking into account the differences between the territories.

Scope: The research findings, innovative solutions, practical knowledge and best practices, are not sufficiently known, shared and used in practice, despite the sustained investment in R&I to support farmers and/or foresters and/or rural communities in becoming more

²⁸⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁸⁶ AKIS is defined in Article 3(9) of the [Regulation \(EU\) 2021/2115](#)

²⁸⁷ An “(end-)user” of R&I result(s) is a person who is him/herself putting the results into practice (i.e. practitioner); depending on the theme of the thematic networks, end-users could be farmers and/or foresters and/or other rural actors, or all of them.

²⁸⁸ i.e., beyond the duration of the thematic network.

²⁸⁹ Including CAP-funded EIP-AGRI operational groups innovation projects, Horizon-funded R&I projects and other R&I activities beyond those funded under CAP and EU R&I programmes

competitive, sustainable and resilient. Moreover, national/regional and sectoral AKIS are insufficiently connected and organised to intensify thematic collaboration between researchers, advisors, and end-users.

Proposals should:

- select the theme of the thematic network in a bottom-up way in order to respond to the most urgent need(s) from practice; explain the relevance of the theme in relation to end-users' need(s), clarifying the added-value of the proposal and how it avoids duplication in relation to the ongoing or completed thematic networks and projects²⁹⁰;
- collect and compile all up-to-date scientific and practical knowledge, best practices and innovative solutions, which are effective and ready for use in practice to address the end-users' needs, but not commonly known and/or used by the end-users; and, if needed, translate/adapt them to diverse local contexts;
- develop and share widely an extensive range of useful, applicable and appealing informative materials and training courses using the most effective approaches, formats, tools (including audio-visual) and channels to reach as many advisors and end-users as possible. The information provided should be easy to access and understand, and translated into at least all 24 EU official languages to allow dissemination across the whole EU. As much as possible, the outputs of the thematic network should serve education and training, knowledge exchange programmes, AKIS knowledge hubs, advisors providing targeted advice, peer-to-peer learning activities, etc.;
- provide a summary of the costs and benefits analysis of the collected practices for the end-users, and include these aspects explicitly in the informative materials and training courses;
- feed all the practice-oriented outputs directly into EU, national and regional AKIS dissemination channels that are most used and trusted by end-users in the diverse contexts, including (but not limited to) the EU and National CAP Networks²⁹¹, the EU-FarmBook online platform and the AKISConnect platform²⁹² and relevant advisory networks²⁹³;
- mobilise also relevant AKIS actors and use AKIS actions at EU/national/regional and European levels to share the outputs of the project widely across the EU.

The proposal should include a dedicated work package, providing adequate resources for collecting outputs from the EIP-AGRI Operational Group projects (OGs)²⁹⁴ on the theme

²⁹⁰ A theme already covered by a finished thematic network(s) is not allowed, unless the added value of the thematic network proposal is clearly explained and justified.

²⁹¹ [Innovation & knowledge exchange | EIP-AGRI | EU CAP Network](#)

²⁹² [EU-FarmBook \(eufarmbook.eu\)&akisconnect | Connecting all EU AKIS actors](#)

²⁹³ [Advisory networks – connecting advisors across the EU | EU CAP Network \(europa.eu\)](#), including projects selected under topic HORIZON-CL6-2025-03-GOVERNANCE-13

²⁹⁴ supported under the Rural Development Programmes (RDP) 2014-2022 and the CAP Strategic Plans (CSP) 2023-2027

chosen, as well as creating collaboration opportunities and fostering knowledge exchanges with and between them. The proposal should indicate which OGs could be relevant to the theme chosen.

The activities of the thematic network should complement with those organised by the EU CAP Network²⁹⁵.

Proposals must implement the 'multi-actor approach', with a consortium based on a balanced mix of relevant actors with complementary knowledge clearly activating advisors, farmers and/or foresters and/or rural actors in the identification of the most urgent needs from practice as well as in the planning and execution of the main tasks of the thematic network.

The resulting project should run for a minimum of 3 years. An initial plan on how the thematic network and its outputs will be updated and maintained in the long-term beyond the projects duration should be included in the proposal.

The consideration of social diversity (including gender and other categories) in the dissemination activities of the thematic networks is encouraged.

HORIZON-CL6-2025-03-GOVERNANCE-13: Strengthening knowledge and skills of advisors and integrating them within Agricultural Knowledge and Innovation Systems (AKIS) via an EU advisory network

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: The proposals must use the multi-actor approach. See definition of the multi-actor approach in the introduction to this Work Programme part.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the</p>

²⁹⁵

[Innovation & knowledge exchange | EIP-AGRI | EU CAP Network](#)

	<p>Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁹⁶.</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>
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Expected Outcome: Successful proposal will support the common agricultural policy (CAP), in particular its cross-cutting objective²⁹⁷, and related climate, biodiversity and other environmental policies, by connecting impartial advisors across all EU Member States in an EU-wide network.

Project results are expected to contribute to all of the following expected outcomes:

- the organisation and integration of impartial advisors (both public and private) within the national/regional and European AKIS²⁹⁸ is strengthened, and the exchanges between them and other relevant AKIS actors are intensified²⁹⁹;
- the impartial advisors are better equipped with the practice-oriented and up-to-date knowledge, skills and tools enabling them to support farmers with high quality and impartial advice covering the three dimensions of sustainability – economic, environmental and social – in line with all objectives of the CAP³⁰⁰;
- the sharing and use in practice of existing and new knowledge and solutions by farmers is accelerated and widespread thanks to more competent, skilled and impartial advisors, supporting the transition towards more competitive, sustainable and resilient farming.

Scope: Advisors are best placed to encourage farmers to change their practices that improve the competitiveness, sustainability and resilience of farming. A novelty in the current CAP strategic plans³⁰¹ is that advisors should be integrated within the AKIS as well as be impartial, competent and up to date on scientific and innovation developments. They should be able to translate the knowledge and provide concrete, targeted and practical solutions for farmers adapted to specific local circumstances. They should be prepared to provide innovation

²⁹⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁹⁷ Article 6(2) of the [Regulation \(EU\) 2021/2115](#)

²⁹⁸ AKIS is defined in Article 3(9) of the [Regulation \(EU\) 2021/2115](#)

²⁹⁹ To this end strong interaction with AKIS Coordination Bodies organising advice and knowledge flows within their Member States will be necessary and illustrated in the proposal.

³⁰⁰ In line with the Article 15(3) of the [Regulation \(EU\) 2021/2115](#), Member States shall ensure that the advice given is impartial and that advisors are suitably qualified, appropriately trained and have no conflict of interest. The proposals should aim to support Member States in fulfilling this obligation.

³⁰¹ Article 15 of the [Regulation \(EU\) 2021/2115](#), Article 15(4)(e) of the [Regulation \(EU\) 2021/2115](#), Article 127(3) of the [Regulation \(EU\) 2021/2115](#)

support services, based on the interactive innovation model. They should also be able to use diverse data sources to analyse the performance of farms over time covering the three dimensions of sustainability and accordingly provide informed, holistic advice to the farmers.

Against this background, proposals should:

- improve the organisation and concrete services provided by impartial advisors, both public and private, within Member States' AKIS in a collaborative way, including by (1) ensuring more networked structures, deepening the advisors' integration into AKIS at EU and national/regional levels, and (2) developing and advancing more effective and interactive working methodologies and tools;
- improve advisors' knowledge and skills across the EU in all areas of high interest to practitioners, covering competitiveness and the three dimensions of sustainability in line with all the objectives of CAP, at minimum by (1) enhancing the provision and management of knowledge useful for practice, and the sound thematic organisation and interaction of advisors and other relevant actors within AKIS in knowledge hubs, ensuring stronger links between research, education, advisors and farmers and encouraging the collection, wider sharing and use of available knowledge across the EU; (2) organising a substantial amount of activities to improve collaboration between advisors at the EU/national/regional levels, and enable them to effectively and widely share their knowledge, experience and skills, (3) creating and sharing tools, training courses and informative materials useful for advisors and their clients, as well as developing and applying approach(es) to motivate advisors to participate in and make use of them;
- improve and support the understanding and implementation of the interactive innovation model by the advisory community acting as innovation support services³⁰², including by (1) illustrating it with practical examples, (2) providing methodology and training for continued professional development, and (3) ensuring regular communication of research and innovation needs collected from practice to the relevant AKIS actors;
- create, regularly update and manage an online platform serving as a reference point for advisors and their clients that includes at minimum: (1) a database of advisors' contacts and profiles (at least including education, professional experience and specific field(s) of expertise), (2) diverse robust data sources and decision support tools (including tutorials), (3) training courses and informative materials, (4) best practice examples (taking account of the costs and benefits for end-users), and (5) other tools and materials relevant for the target audience. The online platform should integrate the practice-oriented outputs from Horizon and CAP-funded projects useful for advisory services, and its entire content (not only interface) should be translated into all 24 official EU languages.

³⁰² e.g., for the creation and implementation of the EIP-AGRI Operational Groups (Article 15(4) of the [Regulation \(EU\) 2021/2115](#))

Proposals should include a dedicated task and appropriate resources to collaborate with, ensure complementarities, avoid duplication of efforts and use efficiently the outputs and activities of the relevant past, existing and future AKIS projects³⁰³.

Proposals must implement the 'multi-actor approach'. Minimum 50% of the number of the participants involved in the project should be impartial advisors spending at least half of their time on giving advice to farmers. The partners within the consortium should be well networked with advisors overall and have the capacity to involve as many of the advisors professionally active in providing advice to farmers as possible across the EU into the activities of the project.

Proposals should cover a wide range of impartial advisors working on diverse themes of interest for practitioners from all EU Member States and improve collaboration between them, using the countries' AKIS structures (including the AKIS Coordination Bodies) as intermediaries. To this end, proposals may involve financial support to third parties to ensure the involvement of advisors from across the whole EU in the activities of the advisory network. Consortia need to define the selection process of the advisors / advisory services and/or other relevant AKIS actors.

The project should run for a minimum of seven years. An initial plan for financial sustainability and maintenance of the EU advisory network in the long-term beyond the project duration should be included in the proposal.

HORIZON-CL6-2025-03-GOVERNANCE-14: Preparing farmers, their workforce and advisors to the future of agriculture by providing the relevant knowledge, skills and competences at the right time and place

Call: Cluster 6 Call 03 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: The proposals must

³⁰³ In particular but not exhaustive the projects funded under Horizon 2020, Horizon Europe and CAP: advisory and thematic networks, [ATTRACTISS](#), [modernAKIS](#), [i2connect](#), [PREMIERE](#), [EU-FarmBook](#), the future project to be selected under the topic HORIZON-CL6-2025-03-GOVERNANCE-14, and relevant EIP-AGRI Operational Groups projects (notably on knowledge hubs)

	use the multi-actor approach. See definition of the multi-actor approach in the introduction to this Work Programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).³⁰⁴.</p>

Expected Outcome: Successful proposals will support the common agricultural policy (CAP), in particular its cross-cutting objective³⁰⁵, and related climate, biodiversity and other environmental policies, by enhancing the relevant knowledge, skills and competences of farmers, their workforce and advisors that they need for the transition to more competitive, sustainable and resilient agriculture.

Project results are expected to contribute to all of the following expected outcomes:

- lifelong learning (LLL)³⁰⁶, including various agricultural educational and training systems, are innovative, fit-for-purpose, more responsive to the diverse and fast-changing needs of the learners, and effective in preparing the current and future generations of farmers, agricultural workers and advisors to the future of farming;
- farmers, agricultural workforce and advisors have the relevant, comprehensive and up-to-date knowledge, skills and competences to cope with and benefit from the various drivers of change, and improve competitiveness, sustainability and resilience of their farms;
- introduction, spread and implementation by farmers in their practice of new knowledge and solutions are accelerated, leading to improved productivity and sustainability performance of farming systems in all three dimensions – economic, social and environmental.

Scope: Knowledge, skills and competences are key enablers for more competitive, sustainable and resilient agriculture³⁰⁷. However, there are growing concerns in many EU Member States

³⁰⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

³⁰⁵ Article 6(2) of the [Regulation \(EU\) 2021/2115](#)

³⁰⁶ [Lifelong learning \(LLL\)](#) encompasses all learning activities undertaken throughout life with the aim of improving knowledge, skills and competences, within personal, civic, social or employment-related perspectives. The intention or aim to learn is the critical point that distinguishes these activities from non-learning activities, such as cultural or sporting activities.

³⁰⁷ [Strategic Dialogue on the future of EU agriculture - European Commission](#)

over the shortages and mismatches of knowledge, skills and competences among the farming community working in the diverse and fast-changing contexts³⁰⁸. To be prepared and benefit from the various climate, environmental, technological, socio-economic and other relevant drivers of change, the farming community, specifically farmers, their workforce, and advisors, should be able to learn and use in practice the relevant knowledge, skills, and competences, at the right time and place in a lifelong journey.

Against this background, proposals should:

- develop, improve and apply methodology to assess and foresee what knowledge, skills and competences farmers, their workforce and advisors currently have and need/will need in the future to improve competitiveness, sustainability and resilience of agriculture in light of the evolving context. This should enable the identification of potential gaps and opportunities for upskilling and reskilling, new LLL activities and methods, and serve as a baseline for future assessments of the actions aimed at enhancing the knowledge, skills and competences.
- map, assess and explore how farmers, their workforce and advisors are and should acquire knowledge, skills and competences (e.g., methods and tools, timing, frequency and place, incentives, etc.), as well as who is and who should be providing them in order for LLL to be practice-oriented, attractive, effective, timely and up-to-date; take into account also how the 27 Member States designed their CAP interventions related to LLL.
- investigate how to widely and effectively disseminate new practice-oriented knowledge and innovations, resulting from e.g. diverse research and innovation projects, among farmers, their workforce and advisors; in particular analyse what approaches/tools, communication materials and channels are preferred, trusted and used by farmers, their workforce and advisors; based on the analysis provide toolbox and guidelines;
- map, assess and compare agricultural LLL, including education and training systems, across the EU and beyond, explore and assess best practices on how to embed the knowledge collected within the Agricultural Knowledge and Innovation Systems (AKIS)³⁰⁹ structures to provide valuable input for LLL, including education and training systems, and provide recommendations for improving LLL, including educational and training systems, in view of making them more effective in supporting the transition to competitive, sustainable and resilient agriculture;
- co-create, pilot, test, and share new, interactive, effective approaches and tools (e.g., exploring the potential of generative AI and social innovation), to stimulate LLL, increase knowledge flows within AKIS and enable farmers, their workforce and advisors to quick, easy and affordable access to impartial and relevant knowledge, skills and competences supporting their decision-making;

³⁰⁸ [Policies for the Future of Farming and Food in the European Union | OECD.](#)

³⁰⁹ AKIS is defined in Article 3(9) of the [Regulation \(EU\) 2021/2115](#)

- explore potential synergies between EU instruments and develop new practical approaches to better connect Horizon-funded projects, EIP-AGRI operational groups projects and Erasmus+ projects to LLL in agriculture, including education and training systems, to maximise the impact of these projects for LLL and promote a more coherent approach to knowledge, skills and competences development;
- develop and test a system(s) compatible with existing EU-wide initiatives³¹⁰ that acknowledge(s) and reward(s) farmers, their workforce and advisors who engage in LLL. The system(s) should include different levels of recognition based on the extent and depth of LLL activity completed, as well as be visible, verifiable, and tied to tangible benefits, providing a strong incentive for continuous learning. The project should also assess how the system(s) can be of benefit for the knowledge, skills and competences development of the farming community.

Proposals should include a dedicated task and appropriate resources to cooperate with project that will be selected under the topic HORIZON-CL6-2025-03-GOVERNANCE-13, ensuring complementarities and avoiding duplication of efforts.

Proposals must implement the 'multi-actor approach', with a consortium based on a balanced mix of relevant actors, including farmers, advisors, agricultural educators and trainers, and other relevant AKIS actors with relevant knowledge and information, and ensuring inclusive co-creation in order to better understand their current and future needs for knowledge, skills and competences, and co-develop the best approaches to effectively address these needs.

Proposals should consider in the research and innovation activities national/regional and context specificities, evolving farm structures and labour organisation, as well as social diversity in a comprehensive way. This topic should involve the effective contribution of social sciences and humanities (SSH) disciplines.

³¹⁰ e.g., [micro-credentials](#), [individual learning accounts](#), [European Quality Assurance Reference Framework in VET](#), etc.

Other actions not subjected to calls for proposals

Grants to identified beneficiaries

1. Presidency events – Boosting and mainstreaming the bioeconomy and the transformative governance of the green transition for food systems and biodiversity

Denmark will take on the Presidency of the Council of the European Union in the second half of 2025. The foreseen Presidency events will be an opportunity to announce the next steps for the EU Bioeconomy Strategy and the EU's Food2030 initiative, and for mainstreaming the bioeconomy concept across different EU policies and instruments.

This action will cover the organisation by the Danish Presidency of two conferences with the following titles: “Boosting and mainstreaming the bioeconomy - Science and governance for the green transition” and “Transformative governance for food systems and biodiversity”. The European Commission will support the organisation of the events in cooperation with the entity designated by the Danish Presidency.

Conference: Boosting and mainstreaming the bioeconomy - Science and governance for the green transition

Expected outcome: This conference is expected to contribute to all of the following expected outcomes:

- an opportunity is provided to take stock of the work under the EU Bioeconomy Strategy, EU R&I Framework Programmes (including Partnerships, Missions, and Joint Undertakings) and the Food2030 initiative;
- recent developments, including a planned update of the Bioeconomy Strategy, are discussed.

Scope: The conference should address all the following activities:

- provide exchanges on the EU's strategic policies and on relevant insights from and for science, innovation and practice, at Member State and EU level.
- provide a space for the presentation of scientific achievements across disciplines, and for exchange of ideas and innovative solutions including bio-based solutions.
- further strengthen the science policy interface for improved and coherent governance and to advance circularity and a sustainable bioeconomy.

The event will bring together European Commission services, Member States, Members of the European Parliament and other EU Institutions, stakeholders, experts and interested citizens, including youth representatives, from across Europe.

Conference: Transformative governance for food systems and biodiversity

Expected outcome: This conference is expected to contribute to all of the following expected outcomes:

- the role of R&I in the existing and possible future governance for food systems and biodiversity is explored and discussed among a diverse range of stakeholders.
- a just, fair and inclusive green transition is supported, while at the same time contributing to achieve the climate targets.

Scope: The conference should address all the following activities:

- highlight the strong links between the transition towards healthy and sustainable food systems, and the transition to a sustainable circular bioeconomy,
- promote stakeholder collaboration and new partnerships across various disciplines and sectors at local, national and European levels,
- exchange results and good practices between ongoing Horizon projects, Missions and partnerships working on food systems and biodiversity,
- increase awareness and engagement from the public, media and other stakeholders about the importance of the transformative governance for the food system and biodiversity for a greener future.

The event will bring together all actors of the food system, such as European and national policymakers from different levels, farmers, academia, SMEs, NGOs, youth representatives, consumers and the private sector, collaborating on advancing policy and R&I on agriculture, food systems and biodiversity for a fair and sustainable future.

Specific conditions:

The starting date of the grant awarded under this action may be as of the submission date of the application.

Subcontracting is not restricted to a limited part of this action.

The evaluation committee will be composed fully by representatives of EU institutions.

Legal entities:

University of Copenhagen, Nørregade 10, 1172 København, Denmark

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and

operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: As of second quarter of 2025

Indicative budget: EUR 0.30 million from the 2025 budget

2. Presidency event - Advancing the bioeconomy strategy for sustainable food and bio-based systems

Research and innovation (R&I) are key enablers for the deployment of the bioeconomy and for developing sustainable food and biobased systems.

Ireland will take on the Presidency of the Council of the European Union in the second half of 2026. The foreseen Presidency event will be an opportunity to build on the new EU Bioeconomy Strategy that is expected to be published by the end of 2025, and the EU's Food2030 initiative, for advancing the bioeconomy across different EU policies and instruments, and for increasing private and public investment.

Expected outcome: this conference is expected to contribute to all of the following expected outcomes:

- The bioeconomy as a vehicle to address the challenges that the EU faces today, including climate change, fossil-fuel dependency and food security.
- The conference provides an opportunity to take stock of the new EU bioeconomy strategy, Food2030 initiative and Horizon Europe (including Horizon Europe Partnerships, Missions, and Joint Undertakings) and other bioeconomy-related EU policies. It will provide exchange on the EU's strategic challenges and on insights from science, innovation and practice, at Member State and EU level.

Scope: the conference should address all of the following activities:

- provide a space for the presentation of scientific achievements, real-world examples of the bioeconomy in action (such as those funded by the Circular Biobased Europe Joint Undertaking) and for exchange of practical ideas and innovative solutions;
- highlight the role of the bioeconomy for vibrant rural, coastal and urban areas, for mobilising primary producers in climate action and in the green transition, and for creating and maintaining jobs, growth, for primary producers, landowners, small and medium sized enterprises, and other rural actors, including through new value-added chains and business models. Possible synergies with the EU Clean Industrial Deal, the Agri-Fish and COMPET Council, the UN FAO, IACGB and the Global Bioeconomy Summit, the EU High Level Policy Forum on the Bioeconomy and the Standing Committee for Agricultural Research (SCAR) could be explored.

The event will bring together the European Commission, Member States, Members of the European Parliament and other EU Institutions, stakeholders, experts and interested citizens, including youth representatives, from across Europe.

The event will take place in Dublin during the Irish Presidency of the Council of the European Union. The European Commission will support the organisation of the event in cooperation with the entity designated by the Irish Presidency.

This grant will be awarded without a call for proposals according to Article 198(e) of the Financial Regulation and Article 24(3)(b) of the Horizon Europe Regulation to the legal entity identified below.

Specific conditions:

The starting date of the grant awarded under this action may be as of the submission date of the application.

Subcontracting is not restricted to a limited part of this action.

The evaluation committee will be composed fully by representatives of EU institutions.

Legal entities:

Department of Agriculture, Food and the Marine, Agriculture House, Kildare Street, Dublin D02 WK12, Ireland

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: As of second quarter of 2025

Indicative budget: EUR 0.30 million from the 2025 budget

Public procurement

1. Coordination and support service for Circular Cities and Regions Initiative (CCRI)

The transition to a circular economy is key to reducing pressures on natural resources. It is also a prerequisite to achieve the EU's 2050 climate neutrality target and to halt biodiversity loss. For these reasons, the circular economy concept should be a central component in local and regional economies, which have a suitable scale for closing resources loops, creating sustainable circular ecosystems and designing participatory community-based innovation

- (i) support the dissemination and exploitation of project results;
- (ii) contribute to the definition of future challenge priorities;
- (iii) carry out specific evaluations of programme parts;
- (iv) organise conferences, events and outreach activities.

Should existing framework contracts prove unsuitable or insufficient to support these activities, one or more calls for tender may be launched, as appropriate. The contracts envisaged cover the following subjects: studies, technical assistance, conferences, events and outreach activities.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: throughout 2025

Indicative budget: EUR 0.60 million from the 2025 budget

Expert contract actions

1. External expertise to assess and advise on EU research and innovation policy

This action will support the provision of independent expertise in support of the design, implementation and valorisation of EU research policies in the areas currently in scope of Cluster 6: i. environmental observation; ii. biodiversity and natural resources; iii. agriculture, forestry and rural areas; iv. seas, oceans and inland waters; v. food systems; vi. bio-based innovation systems in the EU's bioeconomy and vii. circular systems.

Individual experts will work on the assessment, analysis and valorisation of completed and on-going research and innovation actions and programmes and the identification of future research and innovation needs.

The assessment and advisory tasks of individual experts can include the following:

- analysis of the contribution of research results (at national, EU and/or international level) to EU policy objectives and emerging issues, including policy recommendations where appropriate.
- analysis of research results at national, EU and/or international level (e.g. portfolio analysis), which may imply quantitative assessments and/or qualitative assessments.
- identification of innovative solutions as well as potential gaps and synergies to be addressed by EU research and innovation policy.
- advice on the valorisation, communication, dissemination and exploitation of research results.

- participation in conferences and events, e.g. including the drafting of papers and reports on their conclusions.

A special allowance of EUR 450/day will be paid to the experts appointed in their personal capacity who act independently and in the public interest.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative budget: EUR 1.00 million from the 2025 budget

Subscription actions

1. GEO subscription 2025

The EU provides an annual contribution to activities of the Group of Earth Observations (GEO) Secretariat for 2025. As reaffirmed by the Cape Town declaration³¹² GEO is committed to advancing the implementation of the Paris Climate Change Agreement, the Sendai Framework for Disaster Risk Reduction, the 2030 Agenda for Sustainable Development, and the New Urban Agenda.

As a full member of the GEO, the Commission will pay a contribution on the EU's behalf to the GEO Trust Fund, which is the budgetary structure agreed by GEO members to fund the GEO Secretariat and some GEO activities, including GEOGLAM (hosted by the World Meteorological Organisation in Geneva, Switzerland).

This contribution will help ensure that the GEO secretariat operates according to its concept of operation and annual operations plan, agreed by the GEO Executive Committee (which the EU is co-chairing together with China, USA, and South Africa). At least EUR 0.20 million EUR of the contribution shall be used to support the function of a regional GEO coordinator in charge of the European caucus. Another EUR 0.30 million EUR of the contribution shall be reserved for the GEOGLAM directorate hosted by the GEO secretariat.

Type of Action: Subscription action

Indicative timetable: As of second quarter of 2025

Indicative budget: EUR 1.60 million from the 2025 budget

³¹²

[Cape Town Ministerial Declaration and Youth Declaration \(earthobservations.org\)](https://earthobservations.org/CapeTownDeclaration.html)

Budget^{313 314}

	Budget line(s)	2025 Budget (EUR million)	2026 Budget (EUR million)	2027 Budget (EUR million)
Calls				
HORIZON-CL6-2025-01		345.00	50.00	50.00
	<i>from 01.020260</i>	<i>345.00</i>	<i>50.00</i>	<i>50.00</i>
HORIZON-CL6-2025-02		352.50	138.00	144.00
	<i>from 01.020260</i>	<i>352.50</i>	<i>138.00</i>	<i>144.00</i>
HORIZON-CL6-2025-03		129.40		
	<i>from 01.020260</i>	<i>129.40</i>		
HORIZON-CL6-2025-01-two-stage		48.00		
	<i>from 01.020260</i>	<i>48.00</i>		
HORIZON-CL6-2025-02-two-stage		74.00		
	<i>from 01.020260</i>	<i>74.00</i>		
Contribution from this part to call HORIZON-CL4-2025-01 under Part 7 of the work programme		12.00		
	<i>from 01.020260</i>	<i>12.00</i>		
Other actions				
Grant awarded without a call for proposals according to Financial Regulation Article 198(e)		0.60		
	<i>from</i>	<i>0.60</i>		

³¹³ The budget figures given in this table are rounded to two decimal places.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

³¹⁴ The contribution from Cluster 6 for the year 2025 is EUR 153.39 million for the Missions work programme part and EUR 27.97 million for the New European Bauhaus Facility work programme part.

Horizon Europe - Work Programme 2025
Food, Bioeconomy, Natural Resources, Agriculture and Environment

	01.020260			
Public procurement		3.60		
	from 01.020260	3.60		
Expert contract action		1.00		
	from 01.020260	1.00		
Subscription action		1.60		
	from 01.020260	1.60		
Estimated total budget		967.70	188.00	194.00

EN

**Horizon Europe
Work Programme 2025**

10. European Innovation Ecosystems (EIE)

IMPORTANT NOTICE:

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

This draft is made public before the adoption of the work programme to provide potential participants with the currently expected main lines of this work programme. Only the adopted work programme will have legal value.

The adoption of the work programme will be announced on the Horizon Europe website and on the Funding and Tenders Portal.

Information and topic descriptions indicated in this draft may not appear in the final work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

The Commission expressly disclaims liability for any future changes of the content of this document.

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DRAFT

Introduction

The European Union (EU) and the world face a series of profound and rapid changes including in the areas of climate, the digital transition, and geopolitics. The climate emergency, the slow economic growth and Russia's war of aggression in Ukraine are causing unique social and economic challenges calling for urgent action. These pressing challenges have spurred researchers, entrepreneurs, industry, public authorities and institutions, civil society organisations, and people across the globe into close cooperation to identify and co-develop innovative solutions to increase resilience and global environmental sustainability. In particular, deep tech¹ innovations, emerging from a growing cohort of innovative startups in the EU, have the potential to deliver transformative solutions in the face of these global challenges.

Collaboration for innovative solutions is also crucial to boost Europe's competitiveness. Despite the competitive advantages of the European innovation ecosystems, much of the knowledge produced by researchers working in Europe remains unexploited. As has been highlighted by the Draghi report, a key reason behind this failure is the fact that researchers in Europe are less well integrated into networks of universities, start-ups, large companies and venture capitalists, which account for a large share of successful commercialisations in high-tech sectors.² Strengthening the networks, providing them with the infrastructure and resources they need, is a crucial step to putting research and innovation at the heart of our economy, as stated in the Political Guidelines for the Next European Commission 2024-2029.³

To be effective and fair, this new role for research and innovation should be open to all stakeholders and citizens who wish to be part of the research and innovation cycle. In this spirit, the Letta report has called for the addition of a fifth freedom to the traditional four freedoms – the freedom of investigating, exploring and creating for the benefit of humankind without disciplinary or artificial borders and limitations.⁴ The fulfilment of such freedom clearly presupposes well-functioning and inclusive innovation ecosystems.

Against this background, the European Innovation Ecosystems work programme aims to create and expand more connected, inclusive, and efficient innovation ecosystems⁵ that support the scaling of companies and spur innovation with a view to addressing key

¹ Deep tech is technology that is based on cutting-edge scientific advances and discoveries and is characterised by the need to stay at the technological forefront by constant interaction with new ideas and results from the lab. Deep tech is distinct from 'high tech' which tends to refer only to Research & Development intensity. Deep tech innovation aims to provide concrete solutions to our societal problems by finding its source in a deep interaction with the most recent scientific and technological advances and by seeking to produce a profound impact in the targeted application areas.

² [The future of European competitiveness – A competitiveness strategy for Europe](#)

³ [Ursula Von der Leyen, Europe's Choice: Political Guidelines for the Next European Commission 2024-2029.](#)

⁴ [Enrico Letta - Much more than a market \(April 2024\) \(europa.eu\)](#)

⁵ Definition as per Article 2(47) of the [Horizon Europe Regulation](#).

challenges in a holistic and responsible way, as laid out in the New European Innovation Agenda⁶.

The work programme contains actions under two (2) destinations: CONNECT and INNOVSMES.

- The actions under the CONNECT destination focus on building interconnected and inclusive innovation ecosystems across the EU. Drawing on the existing strengths of national, regional and local ecosystems and encouraging the involvement of all actors and territories, this destination aims to reinforce network connectivity for sustainable business growth and to define and achieve ambitious collective goals for the benefit of society, including green, digital, and social transitions. It supports the flagship actions on *accelerating and strengthening innovation in European Innovation Ecosystems across the EU and addressing the innovation divide, funding for deep tech scale-ups and enabling deep tech innovation through experimentation spaces and public procurement* under the New European Innovation Agenda.
- The action under the INNOVSMES destination will support the European Partnership on Innovative Small and Medium-sized Enterprises (SMEs), which will help innovative SMEs to increase their research and innovation (R&I) capacity and productivity and successfully embed in global value chains and access new markets.

In addition, it contains a number of other actions supporting the policy and programme goals of European Innovation Ecosystems.

This work programme contributes to all key strategic orientations and impact areas of Horizon Europe⁷ and to increasing innovation cohesion. Furthermore, it works in complementarity with several other EU initiatives, including: the European Innovation Council (EIC), the European Institute of Innovation and Technology (EIT), including the Knowledge and Innovation Communities (KICs) and the Regional Innovation Scheme, the “Widening participation and strengthening the European Research Area” work programme and other innovative activities across Horizon Europe, the Interregional Innovation Investments (I3) instrument (European Regional Development Fund) under Cohesion Policy and the regional Smart Specialisation Strategies, Euroclusters under the Single Market Programme, the Digital Europe Programme, as well as other relevant funding and policy initiatives at EU, national, regional and local level⁸, such as the Enterprise Europe Network⁹ and the European Defence Fund/European Defence Innovation Scheme.¹⁰

At the policy level, the EIC Forum¹¹ will continue to work in a flexible manner to foster enabling framework conditions and flows of information, knowledge, talent and best practices among actors of innovation ecosystems and the EIC, to fully harness the potential of

⁶ [A New European Innovation Agenda COM\(2022\) 332 final.](#)

⁷ [Horizon Europe strategic plan 2025-2027 - European Commission \(europa.eu\)](#)

⁸ Where applicable, funding from Member States / State resources must be compliant with State aid rules.

⁹ More information under ["Enterprise Europe Network."](#)

¹⁰ More information under ["Defence Industry and Space."](#)

¹¹ More information under ["EIC Forum."](#)

innovation. Overall, it will enhance the exchange of best practices and coordination of national innovation policy initiatives, including by providing policy orientations. By promoting a coherent and inclusive approach to EU innovation ecosystems' policy, it operates in complement to the actions in this work programme.

The National Contact Points for the European Innovation Ecosystems work programme are supported under the EIC work programme.

Proposals are invited against the following three calls for proposals:

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Calls

Call - Partnership on Innovative SMEs (2025.1)

HORIZON-EIE-2025-01

Overview of this call¹²

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)			Expected EU contribution per project (EUR million) ¹³	Indicative number of projects expected to be funded
		2025	2026	2027		
Opening: 06 May 2025 Deadline(s): 19 Jun 2025						
Destination: INNOVSMES - Partnership on Innovative SMEs						
HORIZON-EIE-2025-01-INNOVSMES-01: European Partnership on Innovative SMEs	COFUND	40.00	40.00	28.00	Around 108.00	1
Overall indicative budget		40.00	40.00	28.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and</i>	The criteria are described in General Annex

¹² The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹³ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

<i>exclusion</i>	C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Interconnected Innovation Ecosystems (2025.2)

HORIZON-EIE-2025-02

Overview of this call¹⁴

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁵	Indicative number of projects expected to be funded
		2025		
Opening: 14 May 2025 Deadline(s): 15 Oct 2025				
Destination: CONNECT - Interconnected Innovation Ecosystems				
HORIZON-EIE-2025-02-CONNECT-01: Preparatory action for setting up joint programmes among innovation ecosystems actors	CSA	5.00	Around 1.00	5

¹⁴ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹⁵ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

**Horizon Europe - Work Programme 2025
European Innovation Ecosystems (EIE)**

HORIZON-EIE-2025-02-CONNECT-02: Implementing co-funded action plans for connected regional innovation valleys	COFUND	35.00	5.00 to 8.00	5
Overall indicative budget		40.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Interconnected Innovation Ecosystems (2026.1)

HORIZON-EIE-2026-01

Overview of this call¹⁶

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution	Indicative number of
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¹⁶ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

Horizon Europe - Work Programme 2025
European Innovation Ecosystems (EIE)

		2025	per project (EUR million) ¹⁷	projects expected to be funded
<p style="text-align: center;">Opening: 10 Sep 2025 Deadline(s): 20 Jan 2026</p>				
Destination: CONNECT - Interconnected Innovation Ecosystems				
HORIZON-EIE-2026-01-CONNECT-01: European network of national competence centers for innovation procurement	CSA	4.50	Around 4.50	1
HORIZON-EIE-2026-01-CONNECT-02: Expanding Investment Ecosystems	CSA	5.00	Around 1.00	5
HORIZON-EIE-2026-01-CONNECT-03: Scaling up deep tech ecosystems	RIA	5.00	Around 5.00	1
Overall indicative budget		14.50		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

¹⁷ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Destinations

Destination: CONNECT - Interconnected Innovation Ecosystems

Today's urgent challenges are inherently complex and systemic and will not be solved by individual actors or territories in isolation. Fostering enabling innovation ecosystems across the European Union (EU) requires a systemic approach that is inclusive and collaborative, involves diverse actors, institutions and territories, maximises the value of innovation to all, and ensures equitable diffusion of its benefits.

As highlighted in the European Commission Communication on a New European Innovation Agenda¹⁸, by increasing the inclusion and interconnection of less represented regions and actors into a more strongly integrated European ecosystem, the EU can capitalise on the experience, needs, visions, and perceptions of an increasingly diverse range of people, companies and territories. In doing so, it can also take forward a uniquely inclusive European innovation model that is sustainable, guards against substantial labour market and wage gaps, and associated threats to territorial and social cohesion.

Moreover, such well-connected and diverse ecosystems provide innovative companies with the necessary support and conditions to thrive, i.e. through additional capabilities, data, customers, knowledge, and talents. Network connectivity within and between innovation ecosystems greatly contributes to sustainable business growth with high societal value. Therefore, the actions of this destination aim at strengthening and expanding cooperation between innovation players to better support the next generation of innovative companies whose solutions will lead the shift towards a more competitive EU and a more sustainable, inclusive, and resilient world.

Besides stronger innovation performance, increased competitive sustainability, and more rapid transitions to a green and digital society, ecosystem integration can provide ecosystem actors and companies with access to new resources, markets, customers, and contribute to disruptive and innovative solutions. By being actively engaged in their local, regional, national, and European networks, companies can increase their overall growth potential.

This destination offers a holistic package of actions that:

- Strengthen innovation ecosystems across the EU through fostering more efficient, inclusive, gender diverse, and connected innovation ecosystems, by accelerating the development and deployment of innovation, including deep tech¹⁹ innovation and encouraging co-planning, co-implementation, and co-investments around European strategic priority areas;

¹⁸ [A New European Innovation Agenda, COM\(2022\) 332 final](#)

¹⁹ Deep tech is referring to technology that is based on cutting-edge scientific advances and discoveries and is characterised by the need to stay at the technological forefront by constant interaction with new ideas and results from the lab. "Deep tech" is distinct from 'high tech' which tends to refer only to Research & Development intensity.

- Ensure the inclusion of all key innovation players from across the quadruple helix²⁰, and all EU territories;
- Mobilise policies, funding instruments (EU, national, regional) and fostering synergies between them;
- Improve public and private buyers' capacity to procure innovative solutions and enhance coordination on innovation procurement initiatives within Member States and Associated Countries;
- Promote interregional collaboration and investments with a view to improving territorial cohesion;
- Ensure openness and cross-fertilisation of the innovation ecosystem within and beyond the EU's borders.

In particular, the actions under this destination should promote the creation of links:

- Ensure inclusiveness and diversity with the involvement of varied innovation actors from the quadruple helix, for example, individual inventors, industry, startups, scaleups and SMEs investors, innovation hubs, business associations, clusters, public and private buyers of innovative solutions as well as citizens and civil society organisations.
- Among 'innovation leaders' and 'strong innovators' with 'moderate' and 'emerging innovators' ²¹ across the EU and Associated Countries ²² to increase innovation cohesion²³;
- With networks such as National Contact Points, the European Institute of Innovation and Technology (EIT), Knowledge and Innovation Communities (KICs), and European Innovation Council (EIC) communities, the Enterprise Europe Network (EEN), clusters and Euroclusters, European university alliances, Missions, pan-European platforms such as Startup Europe, public and private regional or local innovation actors, in particular incubators and innovation hubs (e.g. European Research Area hubs and Digital Innovation Hubs);
- InvestEU financial instruments and advisory services bridging access to finance and de-risking projects beyond their upscaling phases, or
- any other EU programme that could interconnect innovators.

²⁰ A model of cooperation between industry, academia, civil society and public authorities, with a strong emphasis on citizens and their needs.

²¹ [Regional Innovation Scoreboard \(RIS\)](#), [European Innovation Scoreboard \(EIS\)](#), [Global Innovation Index \(GII\)](#).

²² Associated countries are described in General Annex B.

²³ The work programme will act in complementarity with the "Widening participation and strengthening the European Research Area" work programme

Where appropriate, the applicants should consider and actively seek synergies with possibilities for further funding from other relevant EU, national and/or regional innovation programmes, including Cohesion Policy funds, the Recovery and Resilience Fund, the EU's External Action instruments, the Growth plan for the Western Balkans²⁴, the Growth Plan for Moldova²⁵ and the Ukraine Plan²⁶, and other public and private funds or financial instruments.

Expected impact

Proposals for topics under this destination should set out a credible pathway to strengthening robust interconnected innovation ecosystems and creating a favourable environment to promote the scalability potential of businesses, including in the deep tech sector, and more specifically to one or several of the following impacts:

- Interconnected, inclusive, and more efficient innovation ecosystems across the EU that draw on the existing strengths of European, national, regional, and local ecosystems and engage new, less well-represented stakeholders and less advanced innovation territories, including rural areas, to set, undertake, and achieve collective ambitions tackling challenges for the benefit of society, including green, digital, and social transitions, and advancing the European Research Area and the New European Innovation Agenda;
- Enhanced cross-border network connectivity and inter-regional collaboration for better innovation performance in the EU with reinforced connections between more and less innovative regions building on strategic areas of regional strength and specialization to create and renew European value chains in areas most relevant for the sustainable green and digital transition and the EU's open strategic autonomy, including the five “burning challenges”²⁷ as defined in the New European Innovation Agenda;
- Enhanced capacity building, experience sharing and cooperation fostering wider implementation of innovation procurement, to shorten the time-to-market for innovative solutions that respond to concrete procurement needs and societal challenges.
- Increase innovation co-investments, fostering synergies and other funding leverages;
- Improved innovation policy coordination and networking activities of the Member States and Associated Countries through the EIC Forum.

Proposals are invited against the following topic(s):

²⁴ COM(2023) 691 final <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2023:691:FIN>

²⁵ COM (2024) 470 final <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52024DC0470>

²⁶ COM (2022) 233 final <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52022DC0233#:~:text=In%20its%20conclusions%20of%20March%202022%2C%20the%20European,assistance%20to%20help%20Ukraine%20to%20implement%20necessary%20reforms>

²⁷ Reducing the reliance on fossil fuels, increasing global food security, mastering the digital transformation (including cybersecurity), improving healthcare and achieving circularity

HORIZON-EIE-2025-02-CONNECT-01: Preparatory action for setting up joint programmes among innovation ecosystems actors

Call: Interconnected Innovation Ecosystems (2025.2)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>This action requires the participation, as beneficiaries, of at least three (3) independent legal entities from three (3) different Member States or Associated Countries, of which at least one (1) is established in a 'moderate' or 'emerging' innovator region and at least one (1) in a 'strong' or 'innovation leader' innovator region.</p> <p>The Regional Innovation Scoreboard is taken as a reference, and in the case of entities representing national authorities, the European Innovation Scoreboard. The applicants must use as a reference the latest version of the documents mentioned above at the time of the call opening. Associated Countries which are not included in the European Innovation Scoreboard and are ranked below 25 on the latest Global Innovation Index are considered as 'moderate' or 'emerging' innovators. In cases of Associated Countries not included in any of the previously mentioned references, the participation rank of the country in the Horizon Europe programme (Horizon Europe country profile) will be taken as a reference and countries ranked below the average will be considered as 'moderate' or 'emerging' innovators.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for</p>

	Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁸ .
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Open dialogue, prepare the ground and facilitate the agreement among Member States, Associated Countries, and/or their regions, in cooperation with public and private sector and research and innovation actors, towards more dynamic, inclusive, gender diverse, and connected innovation ecosystem, via co-planning, co-implementation, and co-investments around areas outlined in the New European Innovation Agenda²⁹;
- Prepare joint long-term programmes and action plans fostering collaboration, common innovation-support activities, and the creation of common knowledge assets among EU, national, regional and/or local level innovation ecosystems, enhancing synergies and complementarities of their programmes and encouraging the alignment of their innovation policies and related policies impacting innovation, for example, innovation procurement strategies, in line with the New European Innovation Agenda, establishing, if relevant, links to the Regional Innovation Valley³⁰. ;
- Ensure the inclusion of diverse innovation players from across the quadruple helix³¹, and several EU territories;
- Foster synergies with other EU funding programmes, including Cohesion Policy instruments and any other funding instruments, including national or regional public funds, and private funds, to complement Horizon Europe support for innovation ecosystems.

Scope: The topic will allow national, regional and/or local authorities in charge of innovation policies and programmes from Member States, Associated Countries and/or their regions, and other research and innovation actors, to prepare joint multi-annual programmes of activities and action plans with the aim of strengthening the performance and capacity of their innovation ecosystems, their efficient interconnection and their alignment towards EU-level priorities, in line with the New European Innovation Agenda³², to jointly tackle challenges at EU, national, regional, and local level.

²⁸ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁹ [A New European Innovation Agenda, COM\(2022\) 332 final.](#)

³⁰ More information under [New European Innovation Agenda - Flagship 3](#)

³¹ A model of cooperation between industry, academia, civil society and public authorities, with a strong emphasis on citizens and their needs.

³² [A New European Innovation Agenda, COM\(2022\) 332 final.](#)

The topic will allow applicants to prepare and agree on a common programme of activities and action plans. The applicants are encouraged to consider a project duration of 12 to 18 months and in their proposals they should:

- Identify areas and activities of cooperation to enhance the coordination and directionality of their research and innovation investments and policies and improve the efficiency and performance of the EU's innovation ecosystems, fostering their interconnection and scale-up:
 - o The proposals are encouraged to focus on one or several thematic/technological areas of common interest in line with one or more EU priorities, including the “burning challenges” specified in the New European Innovation Agenda, as well as the Green Deal, the RePowerEU Plan³³, circularity³⁴ and digital transformation³⁵ and the priorities set out in the Communications by the European Commission on biotechnology and biomanufacturing³⁶ and advanced materials³⁷;
 - o The proposals should take into account gender equality objectives³⁸.
- Explain their links to the New European Innovation Agenda and how the projects will contribute to its objectives;
- Plan their long-term action: the applicants are encouraged to consider planning of at least three (3) years towards engaging in the joint cooperation activities set out in the frame of the projects;
- Provide a justification on the need for those joint activities that should be scalable at European level and demonstrate their strong EU added value, explaining the potential for growth and competitiveness foreseen in the targeted sector
- Explain how the proposed action plans enhance synergies of EU, national and/or regional funds and programmes, and encourage the alignment of their innovation agendas;
- Explain the process that they plan to follow, with an open, clear, realistic, and impact-oriented approach, including relevant guidance mechanisms and tools;
- Present what common knowledge assets are expected from the proposed action plans, and the benefit of the intended beneficiaries of the plans;
- Design pilot schemes for specific actions, with the possibility to test them with non-compulsory FSTP schemes;

³³ [RePowerEU Plan, COM/2022/230 final](#)

³⁴ [Hubs for Circularity](#)

³⁵ [European Digital Innovation Hubs Network \(europa.eu\)](#)

³⁶ [COM\(2024\) 137 final](#)

³⁷ [COM\(2024\) 98 final](#)

³⁸ See for instance the [Horizon Europe regulation](#) for horizontal gender equality principles, the [ERA policy agenda 2022-2024](#), and the [Gender Equality Strategy 2020-2025](#).

- Present the targeted milestones to be achieved.
- Ensure inclusiveness and diversity with the involvement of varied innovation actors from the quadruple helix, for example, individual inventors, industry, startups, scaleups and SMEs investors, innovation hubs, business associations, clusters, public and private buyers of innovative solutions as well as citizens and civil society organisations.

The proposals for the development of a joint long-term action plan may include the following two (2) phases:

- A first phase to foster close dialogue among key stakeholders for strategy/partnership building, mapping, and analysis of existing national and/or regional and/or local innovation agendas/strategies/policies/plans/activities. Proposals are welcome to cover a diverse range of innovation actors that are relevant for the fulfilment of their goals and to foresee ways to motivate their inclusion. Activities are encouraged to consider existing tools, knowledge and expertise, including the methodology and governance tools tested and developed in the context of the Regional Innovation Valleys or the knowledge and expertise of the EIT KICs with place-based approaches to innovation;
- A second phase dedicated to the concretising, setting up, and finalising the joint action plan(s) and allocation of the activities over a period of the proposed action plans.

The implementation of the proposed action plans is not part of this topic, unless the project uses FSTP. For the implementation part, the successful proposals under the topic may seek further financial support from other EU programmes, including Horizon Europe and/or other public and/or private programmes.

HORIZON-EIE-2025-02-CONNECT-02: Implementing co-funded action plans for connected regional innovation valleys

Call: Interconnected Innovation Ecosystems (2025.2)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 35.00 million.
<i>Type of Action</i>	Programme Co-fund Action
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>This action requires the participation, as beneficiaries, of at least three (3) national or regional authorities, from at least three (3) different</p>

	<p>Member States or Associated Countries, of which at least one (1) is representing a 'moderate' or 'emerging' innovator region and at least one (1) is representing a 'strong' or 'innovation leader' innovator region.</p> <p>The Regional Innovation Scoreboard is taken as a reference, and in the case of national authorities, the European Innovation Scoreboard. The applicants must use as a reference the latest version of the documents mentioned above at the time of the call opening. Associated Countries which are not included in the European Innovation Scoreboard and are ranked below 25 on the latest Global Innovation Index are considered as 'moderate' or 'emerging' innovators. In cases of Associated Countries not included in any of the previously mentioned references, the participation rank of the country in the Horizon Europe programme (Horizon Europe country profile) will be taken as a reference and countries ranked below the average will be considered as 'moderate' or 'emerging' innovators.</p> <p>The consortium must allocate at least 50% of their total eligible costs to financial support to third parties and/or to the implementation of the PCP or PPI procurements.</p> <p>The consortium must provide a single letter of intent at the moment of submission of the proposal indicating the source of the required 50% of complementary funding (e.g. national and/or regional funding, EU funding, or private investments).</p> <p>The identical proposals submitted under call HORIZON-WIDERA-2025-05-ACCESS-01: Implementing action plans for connected regional innovation valleys in widening countries are not eligible.</p> <p>Subject to restrictions for the protection of European communication networks.</p>
<p><i>Legal and financial set-up of the Grant Agreements</i></p>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants.</p> <p>The maximum amount to be granted to each third party is EUR 600.000. This amount is justified since the cascading grants will support concrete interregional projects to be undertaken by research and innovation entities. Due to the nature of these projects (e.g. development or deployment of technological innovations) a threshold lower than EUR 600.000 would constitute an obstacle to establishing effective collaborations.</p>

	<p>The funding rate is 50% of the total eligible costs.</p> <p>Grants awarded under this topic will have to submit the following deliverable(s): Annual work plans subject to approval by the Commission. For the first year, the annual work plan needs to be submitted together with the respective proposal.</p>
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Expected Outcome: In line with the New European Innovation Agenda's³⁹ flagship on *accelerating and strengthening innovation in European Innovation Ecosystems across the EU and addressing the innovation divide*, this action is intended to create connected regional innovation valleys across the European Union (EU), involving regions with lower innovation performances, by building on strategic areas of regional strength and specialisation (defined in their smart specialisation strategies), in support of key EU priorities. Regions represented by successful applicant national or regional authorities under this call will be recognised as "regional innovation valleys".

Projects results are expected to contribute to all of the following expected outcomes:

- Efficient, inclusive and interconnected innovation ecosystems across the EU in line with the New European Innovation Agenda, building on their diversities and complementarities, enhancing the joint definition of visions and strategies, involving actors from across the quadruple helix⁴⁰, based notably on their respective national/regional smart specialisation strategies, and strengthening their efficiency and potential to innovate;
- Enhanced synergies, complementarities and cooperation among European innovation ecosystems around strategic areas, technologies and challenges of common European interest, designing projects building on Smart Specialisation Strategies and, where applicable, on the, participation in, for example, Excellence Hubs⁴¹, Digital Innovation Hubs⁴², Hubs for Circularity⁴³, Circular Cities and Regions Initiative⁴⁴, Climate-Neutral and Smart Cities Mission⁴⁵, Enterprise Europe Network⁴⁶, Hydrogen Valleys⁴⁷, Renewable Energy Valleys⁴⁸ and Industry 5.0 System Innovation Hubs⁴⁹;

³⁹ [A New European Innovation Agenda COM\(2022\) 332 final](#)

⁴⁰ Ecosystem quadruple helix model requires the collaboration of academia, business, regional government and societal actors.

⁴¹ [Excellence Hubs - European Commission \(europa.eu\)](#)

⁴² [European Digital Innovation Hubs Network \(europa.eu\)](#)

⁴³ [Hubs4Circularity \(h4c-community.eu\)](#)

⁴⁴ [Circular Cities and Regions Initiative \(europa.eu\)](#)

⁴⁵ [Climate-neutral and smart cities - European Commission \(europa.eu\)](#)

⁴⁶ [Enterprise Europe Network | Enterprise Europe Network](#)

⁴⁷ [H2Valleys | Mission Innovation Hydrogen Valley Platform](#)

⁴⁸ [Renewable Energy Valleys to increase energy security while accelerating the green transition in Europe \(europa.eu\)](#)

⁴⁹ HORIZON-CL4-INDUSTRY-2025-01-HUMAN-65: System innovation experimentation for Industry 5.0 (IA)

- The creation of common knowledge assets within regional innovation valleys, and support to their cross-border connectedness; including, for example, competitive advantages to strengthen their capacity for enhanced quality of their R&I ecosystems (e.g. biotech health security and biotech for food systems, applicability of bioeconomy sustainability principles in regional case studies, as described in the concept note on Regional Innovation Valleys for Bioeconomy and Food Systems⁵⁰);
- Increased innovation capabilities, including in deep tech, in Member States and Associated Countries, allowing innovators to bring their ideas to the market and enable innovations to be scaled up at EU level, and facilitating the link with the private sector, public and private buyers of innovative solutions and other research and innovation actors;
- Better links between innovation 'leaders' and 'strong' innovator regions with 'moderate' and 'emerging' innovator regions across the EU and Associated Countries⁵¹
- More innovation co-investments, mobilising other funding instruments, including European, national or regional public funds and/or other private funds, to complement Horizon Europe support;
- Increased participation of all innovation ecosystems actors across EU territories in technology and industrial value chains (existing and emerging ones) relevant to the EU twin green and digital transition to achieve broader sustainability, the EU's open strategic autonomy and competitiveness⁵².

Scope: The aim of this topic is to foster the creation of efficient, open, inclusive and interconnected European innovation ecosystems in line with the New European Innovation Agenda, notably in thematic/technological areas (including deep tech) that will be critical for EU value chains.

It will also contribute to the twin green and digital transition and a resilient society, and to the net-zero objective⁵³, particularly in the areas of reducing reliance on the fossil fuels, increasing global food security, mastering the digital transformation (including cybersecurity and Artificial Intelligence), improving healthcare, and achieving circularity.

The topic will support strategically oriented long-term programmes of activities (Annual Work Programmes) to enable authorities in charge of public national or regional innovation policies or programmes with the participation of the private sector and research and innovation actors, to implement joint activities towards innovation development and

⁵⁰ [Concept of Regional Innovation Valleys for Bioeconomy and Food Systems](#); see also HORIZON-CL6-2025-03-GOVERNANCE-04: Operationalisation of bioeconomy sustainability principles

⁵¹ [Regional Innovation Scoreboard \(RIS\), European Innovation Scoreboard \(EIS\), Global Innovation Index \(GII\)](#)

⁵² Aligned with the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions “The 2024 Annual Single Market and Competitiveness Report”, COM(2024)77: [EUR-Lex - 52024DC0077 - EN - EUR-Lex \(europa.eu\)](#)

⁵³ [The Green Deal Industrial Plan \(europa.eu\)](#)

deployment, possibly including innovation procurement, aimed at tackling challenges at EU, national and regional level.

The applicants are encouraged to consider a project duration of three to five (3-5) years and proposals should:

- Present the applicants' respective commitment to enhance the coordination and directionality of their research and innovation (R&I) investments and policies, their joint strategic visions, and their proposed joint innovation programme of activities; before the proposal submission the participants should have already selected a thematic/technological area and reached an agreement on what they want to achieve, in order to be able to present concrete action plans; the plans can be further detailed on an annual basis during the implementation of the projects;
- Describe the activities necessary, the process that will be followed, and the research and innovation assets that will be mobilised; activities should be open, clear, realistic, impact-oriented and ensure:
 - o Participation of private actors, either for the joint implementation of proposed activities, and/or their possible co-funding; for example, via links and cooperation with innovative SMEs, start-ups, industry, private entities supporting innovation and innovators, including clusters, associations, as well as investors and foundations;
 - o Complementarity and synergies with other funds (EU, public, and/or private) and innovation-related strategies/policies/programmes/plans at national and/or regional level, including their smart specialisation strategies, and where relevant, the participation in other relevant programmes. Applicants should outline the scope for synergies and/or additional funding, in particular, where this makes the projects more ambitious or increases their impact and expected results.
- Explain the need and the reasons for selecting the proposed Annual Work Programmes that should be scalable at European level and demonstrate their strong EU added value; Annual Work Programmes should:
 - o Include clear steps: (1) capacity building activities, including information exchange and common guidelines; (2) setting common strategy and joint work/action plans; (3) concrete joint activities (including staff exchange, visits, etc.); leading to (4) concrete joint innovation actions (design and implementation of joint funding programmes/calls to select interregional innovation projects).
 - o Include the provisions and modalities for the competitive selection and funding (joint open calls implemented via financial support to third parties - FSTP) of at least three interregional innovation projects in the selected thematic/technological area, including deep tech, linked to key EU priorities:

- These interregional projects are expected to be similar to HE Innovation Actions or close to market actions (TRL 6-8) and should focus on the development and/or deployment of technologies and innovations, including breakthrough and disruptive, through cooperation between research and innovation actors from the participating regions;
 - These interregional projects can also involve the implementation of a Pre-Commercial Procurement (similar as in Horizon Europe PCP grant actions, arriving also to TRL 8) or a Public Procurement of Innovative solutions (similar as in HE PPI grant actions, arriving to TRL 8). In this case the procurements should be implemented in cooperation between public procurers from the participating regions;
 - Each of these interregional projects should aim to deliver concrete and tangible outcomes during the project implementation, and ensure their dissemination and exploitation;
 - These interregional projects should be managed in a coordinated manner, as a portfolio of projects, and should identify and establish links among the projects and with other relevant EU, national or regional projects in similar thematic/technological area (horizontal integration) or complementary areas (vertical integration) with a view to integrate into and contribute to existing or emerging value chains.
- o Include a consistent set of core collaborative activities, for example: networking and coordination structures and tools to facilitate innovation development and access to and sharing of best practices, resources, research/technology infrastructures, talents, markets, expertise, services or knowledge, including open and collaborative knowledge bases and common knowledge assets (methods, data, processes);
- Support to interconnections between innovation hubs/local pockets of excellence; market analysis, development and activities towards better access to new markets and finance for innovative SMEs and start-ups;
 - Training and skills development; interconnection of open innovation infrastructures; supportive activities towards scale up, exploitation and dissemination of innovative solutions;
 - Reinforcing public and private buyers' capacity to procure innovative solutions; Networking of and assistance to public and private procurers to facilitate the implementation of joint or coordinated innovation procurement initiatives;

- Enhancing place-based social cohesion across EU territories, through networks such as European Social Economy Regions initiative⁵⁴, including social innovators and civil society integration, as interlocutors for society and important inputs to the development of innovations and promotion of gender equality and diversity⁵⁵.
- Explain the reasons for selecting the proposed strategic areas of cooperation, and how this cooperation will improve the efficiency and performance of the EU's innovation ecosystems. The joint innovation activities should focus on a specific thematic/technological area, in line with the smart specialisation strategies of the participating regions, and should highlight how it will contribute to innovation priorities of common interest, EU strategic priorities (including green, digital and social transitions, and open strategic autonomy) and, where appropriate, Horizon Europe Missions. It should clarify the potential for growth and competitiveness foreseen in the targeted sector and/or expected impact on EU challenge(s);
- Present and explain how the consortium plans to design and coordinate the implementation of these joint activities (e.g. resources to be mobilised, assets to be used, involvement of innovation stakeholders, such as innovation hubs, business associations, clusters, industry, startups, scaleups and SMEs);
- Include set of Key Performance Indicators (KPIs) in line with the proposed objectives to measures/activities underpinned by verifiable indicators (e.g. referring to the Sustainable Development Goals, European Commission Gender Equality Strategy 2020-2025⁵⁶, or other relevant policy frameworks);
- Ensure their long-term commitment towards engaging in the cooperation activities set up in the frame of their projects (a letter of intent as part of the proposal).

HORIZON-EIE-2026-01-CONNECT-01: European network of national competence centers for innovation procurement

Call: Interconnected Innovation Ecosystems (2026.1)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.50 million.

⁵⁴ [The European Social Economy Regions \(ESER\) \(europa.eu\)](https://europea.europa.eu/en/eu-social-economy-regions)

⁵⁵ [Horizon Europe guidance on gender equality plans - Publications Office of the EU \(europa.eu\)](https://europea.europa.eu/en/gender-equality-plans)

⁵⁶ [Gender equality in research and innovation - European Commission \(europa.eu\)](https://europea.europa.eu/en/gender-equality-research-innovation)

<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>This action requires the participation, as beneficiaries, of at least fifteen (15) independent legal entities, each established in a different Member State or Associated Country.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁵⁷.</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Enhanced capacity of public procurers to carry out PCPs and PPIs;
- Increased amount of PCPs and PPIs taking place at national level and across borders by transnational buyer groups;
- Enhanced awareness among companies, in particular startups and SMEs, of the possibilities offered by innovation procurements to grow their business, by promoting national innovation procurement business opportunities to companies across other EU Member States and Associated Countries;
- Increased amount of EU wide published preliminary market consultations and calls for tenders for PCP and PPI procurements and active promotion of those business opportunities to innovators in EU Member States and Associated Countries;
- Increased recognition of the strategic importance of PCP and PPI by policy makers and in national policies, contributing to increase innovation procurement uptake;
- Expansion and intensification of innovation procurement support measures implemented by innovation procurement competence centers across Europe.

Scope: Many public buyers around Europe still lack experience on innovation procurement and need training and guidance. To tackle this challenge, several countries around Europe

⁵⁷ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

have set up national competence centers that cooperate with policy makers in their country to implement capacity building measures for innovation procurement. With support of Horizon 2020 funding, in the past, five new competence centers were set up and started collaborating with five existing competence centers across borders⁵⁸.

Europe wide benchmarking identified that there are still significant gaps in national capacity building structures for innovation procurement⁵⁹. This action therefore aims to support setting up a European wide network of national competence centers for innovation procurement⁶⁰, inspired by the experience and activities of the previous initiative, and extend it further to additional countries and reinforce its activities.

Activities undertaken by the network are expected to include the creation of new national competence centers for innovation procurement⁶¹ as well as the enlargement and deepening of the scope of activities of existing competence centers. The expected minimum participation is 10 existing national competence centers for innovation procurement plus 5 public bodies that have the mandate to setup 5 new national competence centers for innovation procurement in 5 different Member States or Associated Countries, with at least 2 of the 5 new ones in 'emerging' or 'moderate' innovator countries⁶². The network will thus start with participation from at least 15 different EU Member States or Associated Countries and it is expected to aim for participation of national competence centers for innovation procurement from all Member States in the network by the end of the project.

Activities undertaken by the network should also include experience sharing on the implementation of pre-commercial procurement (PCP) and public procurement of innovative

⁵⁸ The procure2innovate project funded a European network for competence centers on innovation procurement between 2017 and 2021: [procure2innovate: European network of competence centres for innovation procurement | Procure2Innovate | Project | News & Multimedia | H2020 | CORDIS | European Commission](#)

⁵⁹ The 30 countries analysed by the benchmarking have put in place just 27% of capacity building measures to support public buyers to mainstream innovation procurement: https://research-and-innovation.ec.europa.eu/strategy/support-policy-making/shaping-eu-research-and-innovation-policy/new-european-innovation-agenda/innovation-procurement/benchmarking-innovation-procurement-investments-and-policy-frameworks-across-europe_en

⁶⁰ A competence center on Innovation Procurement is an organization/organizational structure that has been assigned the task by the government of a Member State or Associate Country and has a mandate according to national law to encourage wider use of innovation procurement, that includes among others providing practical and/or financial assistance to public procurers in the preparation and/or implementation of PCP and PPI procurements across all sectors of public interest.

⁶¹ New competence centers can include both entities that want to setup a competence center that does not exist yet and still need to start up during the project their first capacity building activities as well as entities that are already providing a few ad hoc innovation procurement capacity building activities but are not yet a national competence center with a systematic and more comprehensive set of capacity building activities.

⁶² For the purposes of assessing which participant represents a 'moderate', 'emerging', 'strong' or 'innovation leader' country, the European Innovation Scoreboard (EIS) is the reference. The applicants must use as a reference the latest version of the documents mentioned above at the time of the call opening. Associated Countries which are not included in the European Innovation Scoreboard and are ranked below 25 on the latest [GlobalInnovation Index](#) are considered as 'moderate' or 'emerging' innovators. In cases of Associated Countries not included in any of the previously mentioned references, the participation rank of the country in the Horizon Europe programme ([Horizon Europe country profile](#)) will be taken as a reference and countries ranked below the average will be considered as 'moderate' or 'emerging' innovators

solutions (PPI) across Europe, promoting Horizon Europe funding and synergies with ESIF funding for PCP and PPI to public procurers in cooperation with NCPs as well as supporting public procurers in launching such procurements.

Cooperation among public procurers is important because potential market size is a key decision factor for firms to participate or not in a public procurement and to help them grow their business across Europe. Scaling up the impacts of completed innovation procurements by diffusing the uptake of innovative solutions to other public buyers is also vital to mainstream innovation procurement. Activities undertaken by the network are therefore also expected to facilitate the creation of national and transnational buyer groups that ensure wider diffusion of innovations from innovation procurements as well as the creation of transnational buyer groups that start new joint innovation procurements on new topics. In this context, attention should be paid to reinforcing procurements that involve strategic technologies that are key for safeguarding Europe's economic security. The network is also expected to promote national innovation procurement business opportunities to companies across other EU Member States and Associated Countries. It is encouraged to collaborate closely with the EIC business acceleration services and the Enterprise Europe Network to ensure a wide outreach among European startups and SMEs and raise their awareness on the business opportunities offered by innovation procurement across EU Member States and Associated Countries.

Planned activities are also expected to include collaboration with national policy makers that are responsible for the policies that support the uptake of innovation procurement, in particular R&I and public procurement policies. The competence centers should cooperate with such policy makers to develop and coordinate policy actions to mainstream PCP and PPI across Europe such as implementing action plans, targets, monitoring and incentive schemes that encourage public procurers to undertake more PCPs and PPIs.

The network is expected to maximize synergies with national and ESIF funding and focus the budget requested from Horizon Europe on activities/partners that cannot be funded from ESIF or for which national funding is not available. The network is expected also to cooperate with other Horizon Europe funded initiatives on innovation procurement to maximize impact and synergies where possible.

The expected duration for the action is 4 years.

HORIZON-EIE-2026-01-CONNECT-02: Expanding Investment Ecosystems

Call: Interconnected Innovation Ecosystems (2026.1)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>This action requires the participation, as beneficiaries, of at least three (3) independent legal entities from three (3) different Member States or Associated Countries, of which at least one (1) is established in a 'moderate' or 'emerging' innovator region and at least one (1) in a 'strong' or 'innovation leader' innovator region.</p> <p>The Regional Innovation Scoreboard is taken as a reference, and in the case of entities representing national authorities, the European Innovation Scoreboard. The applicants must use as a reference the latest version of the documents mentioned above at the time of the call opening. Associated Countries which are not included in the European Innovation Scoreboard and are ranked below 25 on the latest Global Innovation Index are considered as 'moderate' or 'emerging innovators'. In cases of Associated Countries not included in any of the previously mentioned references, the participation rank of the country in the Horizon Europe programme (Horizon Europe country profile) will be taken as a reference and countries ranked below the average will be considered as 'moderate' or 'emerging innovators'.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁶³.</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Increased foreign⁶⁴ venture investments from funds from 'strong' or 'innovation leader' innovator regions and enabling later-stage growth for expansion to these regions of local

⁶³ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁶⁴ For the purposes of this topic, foreign should be understood as from a different EU Member State or Associated Country.

start-ups from less connected and developed innovation ecosystems ('emerging' or 'moderate' innovator regions);

- Increased foreign investors' awareness and access to the flow of local deals from 'emerging' or 'moderate' innovator regions;
- Improved foreign investors' knowledge on regulatory frameworks and networks/syndicates to support joint cross-border venture investment in the above characterised underserved markets.
- Improved start-ups' knowledge from 'emerging' or 'moderate' innovator regions on market and regulatory frameworks and expectations from networks in foreign 'strong' or 'innovation leader' innovator region to support their expansion and access to funding in these regions;
- Increased available and committed venture capital in less connected innovation ecosystems, enhancing their scale, diversity, breadth, openness and potential.

Scope: The lack of later-stage funding and partners for expansion to foreign markets is one of the most problematic aspects of business growth particularly for the startups from less developed innovation ecosystems. In order to scale to a leading business, startups need to expand to foreign markets beyond their region. At earlier stages start-ups are typically supported by local investors and partners. However, in order to expand inside the EU they would need access to the funding from actors with presence and knowledge in these new markets. The lack of partners for expansion to foreign markets beyond their region is harmful for local start-ups' growth and investor activity and the development of regional scale-ups, even more so for women-led companies. While the limited number of established European start-up hubs attract significant money and traction, the innovation ecosystems in other areas struggle to keep pace with fewer resources, including funds and technical expertise. In the struggle for resources, many start-ups face the choice to either forego growth and ultimately close their business or move elsewhere, while foreign investors struggle to enter new markets due to insufficient information about the market, its opportunities and regulatory frameworks.

If organised and structured, investments ecosystems should be able to attract foreign investors into "emerging" and "moderate" innovation ecosystems by raising awareness of local innovation ecosystems and their start-ups, as well as the potential of the whole region, to capital providers from across Europe. Foreign investors should be interested to support startups from these ecosystems to expand to other markets and increase their connectivity to relevant partners and market knowledge.

The action supports co-designed programmes of activities, of at least two (2) years, proposed by business acceleration service providers and/or investor networks and clubs, and/or innovation hubs⁶⁵ located in less developed innovation ecosystems ('emerging' and 'moderate') and more developed ones ('strong innovators' and innovation leaders'), to

⁶⁵ **Innovation hubs** encompass a wide range of stakeholders, including entities from both the private and public sectors, as well as incubators and accelerators.

facilitate the entry of foreign funders from ‘strong innovators’ and innovation leaders’ regions to less developed innovation ecosystems through activities, including at least five of the examples below:

- market orientation/introduction programmes for foreign investors, including establishment of central points of information for foreign investors providing them with knowledge on the ecosystem's establishment conditions, incentives, tax and local legislation;
- market orientation/introduction programmes of developed markets for local startups and funds, including establishment of central point of information providing them with knowledge on the ecosystem's establishment conditions, incentives, tax and local legislation;
- assistance to foreign investors during the whole process of investment, from the pre-entry stage until the exit, by ensuring support in administrative, legal, linguistic and cultural issues;
- roadshow to leading innovation hubs to showcase the potential of the local ecosystem, its promising start-ups and active local investors;
- organisation of European international business forums, conferences and events to attract and connect foreign investors with local investors;
- establishing cooperation with public and private buyers of innovative solutions and with the innovative companies they are buying from; peer-matching of investors and business angles and other networking activities to encourage joint ventures;
- a repository of best practices of market entry facilitation for foreign investors;
- a repository of best practices of market entry facilitation for startups from 'emerging' or 'moderate' innovator regions to markets of foreign 'strong' or 'innovation leader' innovator regions;
- a list of recommendations for local authorities and European regulators to better address investors' entry challenges and facilitate cross-border deals.

All of these activities should be targeted to one or several of the 5 burning challenges of the New European Innovation Agenda in order to ensure more targeted and tailored match between participants and more tailored services. The 5 burning challenges include: reducing the reliance on fossil fuels, increasing global food security, mastering the digital transformation (including cybersecurity), improving healthcare and achieving circularity.

To ensure that the impact of the action goes beyond consortium members and their respective countries, it is encouraged that the consortium works closely with innovation agencies and/or similar government organisations, supporting start-ups and development of innovation and entrepreneurship from their respective territories and beyond, and seeks synergies with

relevant EU initiatives such as the Enterprise Europe Network, as well as with the other projects funded under this topic.

HORIZON-EIE-2026-01-CONNECT-03: Scaling up deep tech ecosystems

Call: Interconnected Innovation Ecosystems (2026.1)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Proposals should include at least one ESFRI Landmark⁶⁶ or European Research Infrastructure Consortium (ERIC)⁶⁷ as beneficiary. In case of a distributed⁶⁸ ERIC, as an alternative to the ERIC participating as a beneficiary, a legal entity that is hosting one of its nodes or components may participate as a beneficiary. A declaration signed by the legal representative of the ERIC should confirm that the ERIC is informed about this participation and describe any further cooperation with the ERIC.</p> <p>At least 60% of the proposed total eligible costs must be allocated to financial support to third parties.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve Technology Readiness Level (TRL) 2-5 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p>
<i>Legal and financial set-up of the Grant</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries should provide financial support to third parties (FSTP).</p>

⁶⁶ See the list of ESFRI 'Landmarks' in the 2021 ESFRI Roadmap: <https://roadmap2021.esfri.eu/>.

⁶⁷ [European Research Infrastructure Consortium \(ERIC\) | European Commission \(europa.eu\)](https://roadmap2021.esfri.eu/).

⁶⁸ The term 'distributed' research infrastructure typically refers to one or a few central hubs and several interlinked (national or institutional) nodes where many components of the research infrastructure may not be part of the same legal entity, the ERIC.

<i>Agreements</i>	<p>The support to third parties can only be provided in the form of grants.</p> <p>The maximum amount to be granted to each third party is EUR 500,000. This amount is justified since the projects funded will support the creation of an innovation ecosystem through concrete collaborative R&I projects, and research infrastructures will be engaged in different technological collaborations. Due to the nature of this action, a threshold lower than EUR 500,000 would hinder the engagement of research infrastructures with different partners; this would not allow for the creation of an ecosystem supporting the take up of technological innovations resulting from the use of research infrastructures.</p>
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Enhanced development of deep tech⁶⁹ ecosystems around pan-European research infrastructures⁷⁰ to generate, scale and deploy breakthrough technologies with market and societal value;
- Increased involvement of industry, including SMEs, with research infrastructures to raise the technology level and competitiveness of companies and generate market opportunities, including through the generation of start-up or spin-off companies;
- Improved valorisation of the socio-economic impact of past investments in pan-European research infrastructures from the European Structural and Investment Funds;
- Foster the potential of pan-European research infrastructures for innovation training and education.

Scope: Pan-European research infrastructures are strategic assets to boost R&I, scientific discoveries and deep-tech developments at regional, national and European levels. They have a strong role in increasing the R&I potential of academia and industry in local and regional ecosystems, thus enhancing competitiveness, innovation in strategic areas and overcoming fragmentation. The Council conclusions on strengthening the competitiveness of the EU and overcoming the fragmentation of the European Research Area⁷¹ encouraged better use and deployment of Research Infrastructure facilities and services by academia and industry, including SMEs and start-ups across the entire EU.

As providers of advanced services and procurers of cutting-edge technologies, RIs have an innovation potential related to the development of components, instruments, services and knowledge that could be better exploited to push the edge of existing technologies and lead to their deployment for market-oriented or socially useful purposes.

⁶⁹ C.f. deep tech definition on footnote 18.

⁷⁰ ESFRI: www.esfri.eu

⁷¹ [Council Conclusions on Strengthening the competitiveness of the EU, reinforcing the European Research Area and overcoming its fragmentation](#)

The aim of the action is to respond to industry needs and to better valorise interactions that research infrastructures have with companies, facilitating deep collaboration and co-development.

The proposals should pilot the possibility to seed the development of innovation ecosystems around diverse technological areas related to pan-European research infrastructures by providing grants to pilot projects in three to five different technological areas.

The proposals should:

- identify deep tech innovations with breakthrough potential related to pan-European research infrastructures;
- assess the feasibility and scalability of the identified innovations;
- suggest a selection and clustering of those innovations that demonstrate sufficient maturity to provide a clear potential for industrial implementation and demonstrate the strongest market and societal value;
- run, evaluate calls and give convincing arguments to provide grant funding to pilot projects in the identified technological areas;
- assess the outcome of the pilot grants.

Destination: INNOVSMES - Partnership on Innovative SMEs

Small and medium-sized enterprises (SMEs) represent the backbone of the European economy. They represent 99.8% of all enterprises in the European Union (EU) non-financial business sector and two thirds of employment. However, SMEs in Europe face obstacles to growth, expansion and scaling up, including lack of skills, administrative burden, and access to finance. Many lack capacity for innovation and struggle to enter international markets.

Greater cooperation with partners in Europe and beyond can help to address many of these issues. However, opportunities for bottom-up, international collaborations are limited. European SMEs can struggle to find support for their internationalisation efforts. At national level, support is often limited to collaboration among partners within the same Member State. Levels of investment to support internationalisation in European innovative SMEs vary and there is suboptimal co-ordination of national schemes. Overall, these issues weaken the resilience of the European innovation ecosystem.

The objective of this call is to continue to provide support to the European Partnership of Innovative SMEs identified in the Horizon Europe Strategic Plan 2021-2024 and the Strategic Plan 2025-2027 and first implemented under the topic HORIZON-EIE-2021-INNOVSMES-01-01: European Partnership on Innovative SMEs, and in particular to fund additional activities (which may also be undertaken by additional partners) in view of its intended scope and duration, and in accordance with Article 24(2) of the Horizon Europe Regulation.

The proposal for the topic under this destination should cover a specific niche that other EU, national and regional interventions do not address for the benefit of innovative SMEs in Europe: cooperation among European and/or international partners, with at least one innovative SME as the project leader. The proposed additional activities would help innovative SMEs to increase their research and innovation (R&I) capacity and productivity and to become embedded in global value chains and new markets. It would achieve this by supporting innovative SMEs in developing products, processes and services through funding market-led, cross-border, R&I collaborative projects and providing accompanying measures. It would enable global collaboration and the commercialisation of new knowledge. It would thereby strengthen the overall resilience of the European innovation ecosystem.

In line with the Horizon Europe objectives⁷² it aims to generate knowledge, support the access to and uptake of innovative solutions by SMEs (including to address global challenges), facilitate technological development, demonstration, knowledge and technology transfer, and strengthen deployment and exploitation of innovative solutions.

In line with Horizon Europe Strategic Planning, the Partnership aims to contribute to global and European policies, focusing on the strategic priorities of the new European Commission towards a new plan for Europe's sustainable prosperity and competitiveness, putting research and innovation in the heart of our economy.

⁷² [Horizon Europe Regulation](#), Article.3.2.(b), (c).

In line with the Global Approach to Research and Innovation⁷³, the Partnership aims to facilitate the internationalisation of European SMEs by establishing win-win international innovation Partnerships, such as networks of incubators and accelerators with countries that offer reciprocal openness to entrepreneurship and investment, promoting mobility of innovators in both directions. The envisaged activities will build on tools developed and experience gained. They will also create synergies with other supporting mechanisms.

Expected impact

The proposal for the topic under this destination should set out a credible pathway to contributing to the following impacts:

To help European innovative SMEs to grow and successfully access European and international markets and to embed in global value chains by:

- Contributing to the strategic priorities of the new European Commission with a special focus in promoting the new plan for Europe's sustainable prosperity and competitiveness as stated in the Political Guidelines for the new European Commission 2024–2029⁷⁴;
- Strengthening the innovation performance, output, potential and resilience of the European innovation ecosystem;
- Addressing the productivity and internationalisation gap between innovative SMEs and large companies and aiming to improve SMEs' global scale-up potential leading to increased employment and turnover;
- Leveraging investment for innovative SMEs.

Proposals are invited against the following topic(s):

HORIZON-EIE-2025-01-INNOVSMES-01: European Partnership on Innovative SMEs

Call: Partnership on Innovative SMEs (2025.1)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 108.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 108.00 million.
<i>Type of Action</i>	Programme Co-fund Action

⁷³ [COM\(2021\) 252 final.](#)

⁷⁴ [Ursula Von der Leyen, Europe's Choice: Political Guidelines for the Next European Commission 2024-2029](#)

<p><i>Eligibility conditions</i></p>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The proposal must be submitted by the coordinator of the consortium funded under HORIZON-EIE-2021-INNOVSMES-01-01 and HORIZON-EIE-2023-INNOVSMES-01: European Partnership on Innovative SMEs. This eligibility condition is without prejudice to the possibility to include additional partners.</p> <p>Subject to restrictions for the protection of European communication networks.</p>
<p><i>Procedure</i></p>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>If the proposal is successful, the next stage of the procedure will be grant agreement amendment preparations.</p> <p>If the outcome of amendment preparations is an award decision, the coordinator of the consortium of the grant funded under HORIZON-EIE-2021-INNOVSMES-01-01 and HORIZON-EIE-2023-INNOVSMES-01: European Partnership on Innovative SMEs will be invited to submit an amendment to the grant agreement, on behalf of the beneficiaries.</p>
<p><i>Legal and financial set-up of the Grant Agreements</i></p>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>This action is intended to be implemented in the form of an amendment of the grant agreement funded pursuant to topics HORIZON-EIE-2021-INNOVSMES-01-01 and HORIZON-EIE-2023-INNOVSMES-01: European Partnership on Innovative SMEs.</p> <p>For the additional activities covered by this action:</p> <ul style="list-style-type: none"> • Beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. • Financial support provided by the participants to third parties is one of the primary activities of this action in order to be able to achieve its objectives. • The maximum amount of FSTP to be granted to an individual third party is EUR 25.000.000 (also including any FSTP already provided for activities not covered by this action). This amount is justified since the provision of FSTP is the main and primary activity of this action in order to achieve the objectives of the Partnership, which are to enable innovation and foster internationalisation of SMEs through collaborative projects. This

	<p>amount is based on the extensive and justified experience under predecessors of this Partnership.⁷⁵</p> <ul style="list-style-type: none"> • At least two thirds (67%) of the projects supported through FSTP must involve at least two beneficiaries from Member States or Associated Countries. • The funding rate is 30 % of the eligible costs. <p>The starting date of grants awarded under this topic may be as of the submission date of the application. Applicants must justify the need for a retroactive starting date in their application. Costs incurred from the starting date of the action may be considered eligible, and will be reflected in the entry into force date of the amendment to the grant agreement.</p>
<i>Total indicative budget</i>	<p>The total indicative budget for the topic is EUR 108.00 million (EUR 40.00 million from the 2025 budget, EUR 40.00 million from the 2026 budget and EUR 28.00 million from the 2027 budget).</p>

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Improved knowledge transfer in the European innovative Small and Medium-sized Enterprises (SMEs) ecosystem, through increased and sustained collaboration between SMEs, public research partners and academia;
- Mitigation of difficulties in access to finance for European innovative SMEs and thus contribute to enhanced growth and expansion of European innovative SMEs;
- Improved European innovative SME access to new international markets or value chains thus leading to improved market share and sales for European innovative SMEs increasing their employment capacity;
- Increased public research and innovation funding to European innovative SMEs, to spur more high-quality collaborations and more innovative solutions;
- Pull together national efforts to spur internationalisation and collaboration in European innovative SMEs, avoiding unnecessary duplication leading to a simplified offer to beneficiaries, achieving a more balanced geographic participation, ensuring complementarity and improved innovation ecosystems across Europe;
- Identify and better exploit existing or emerging opportunities in the global markets and establish win-win international innovation partnerships, such as networks of incubators

⁷⁵ However, if the objectives of the action would otherwise be impossible or overly difficult (and duly justified in the proposal), the maximum amount may be higher.

and accelerators with the help of the Innowide instrument and other existing support mechanisms.

Scope: The objective of this action is to continue to provide support to the European Partnership of Innovative SMEs identified in the Horizon Europe Strategic Plan 2021-2024 and first implemented under the topic HORIZON-EIE-2021-INNOVSMES-01-01: European Partnership on Innovative SMEs, and in particular to fund additional activities (which may also be undertaken by additional partners) in view of its intended scope and duration, and in accordance with Article 24(2) of the Horizon Europe Regulation.

The consortium which applied to and received funding under the European Partnership on Innovative SMEs topic of the European Innovation Ecosystems Work Programme 2021-2022 and 2023-2024 is uniquely placed to submit a proposal to continue the envisioned Partnership. Not only did this consortium submit the proposal leading to the identification of the partnership in the Horizon Europe strategic plannings for the periods 2021-2024 and 2025-2027, it has also implemented the Partnership through co-funded calls in 2021-2024 based on this planning and further to the European Partnership on Innovative SMEs topic. It is also deemed relevant that the same consortium was responsible for carrying out the Horizon 2020 predecessor programme EUROSTARS 2. In this context, the current consortium has particular expertise in relation to the objectives of the Partnership, the activities to be implemented and other relevant aspects of the action. In practice, another consortium could not continue the activities of the Partnership underway without significant disruption to the ongoing activities, if at all.

The proposal should cover additional activities which are not covered in the existing grant agreement. The proposal should address time, resources and activities building on the two main types of activities from the previous period. These are largely additional calls for proposals covering the 2025-2027 period (Eurostars and INNOWIDE projects) resulting in international collaborative research and innovation projects. The proposal should in addition include the lessons learnt and analyse results from at least the Eurostars calls of this Partnership in the period 2021-2024 of implementation, in order to potentially improve the activities during the forthcoming period. Furthermore, its results and lessons learnt from the previous Eureka-INNOWIDE calls should be analysed. These additional activities should contribute to the further development of the “Eureka-INNOWIDE” scheme. Coordination and support activities, the creation of synergies between and synchronisation of national programmes, and a better cooperation and knowledge exchange between national intermediaries should be continued through new or repeated activities and additional events during the forthcoming period.

Collaborative research and innovation activities and a strong focus on support to the internationalisation of European innovative SMEs should drive the additional activities and calls for proposals during the period 2025 to 2027 in line with the overall call schedule until the end of the partnership. There is a clear added value and ‘selling point’ for the continuation and additional calls under this initiative to further address gaps towards a better alignment and increased focus on internationalisation. This reflects the definition of European Partnerships

in Horizon Europe⁷⁶ as initiatives where the European Union and its partners ‘commit to jointly support the development and implementation of a programme of research and innovation activities, including those related to market, regulatory or policy uptake.’

The below list of specific activities, going beyond research and innovation activities, can therefore be implemented throughout the duration of the action (continuation of the Partnership) and are anticipated as expected outputs:

- Support transnational near-market collaborative research and innovation addressing technological and societal challenges;
- Enhance SME readiness (absorption capacities in all participating countries),
- Attract wide range of beneficiaries by country and SME type and age;
- Create synergies among national programmes by streamlining their implementation;
- Enhance cooperation and knowledge exchange at level of national intermediaries.
- Lessons learnt concerning proposals and project implementations for future improvements.

The proposed continuation of the initiative will help innovative SMEs to further increase their research and innovation capacities and productivity, shorten the time to market of their innovations and to become embedded in global value chains and new and/or expanded markets. It will achieve this through additional support to innovative SMEs in developing products, processes and services through funding market-led, cross-border, research and innovation collaborative projects and providing accompanying measures. The initiative addresses collaboration in Europe and beyond, and the commercialisation of new knowledge to public and private sector markets. Thereby it will strengthen the overall resilience of the European innovation ecosystem.

The overall objective of the initiative is to implement a co-funded European Partnership for Innovative SMEs to stimulate economic growth and job creation by enhancing the competitiveness of innovative SMEs while contributing to deliver a positive economic, societal and environmental impact in Europe and beyond.

In order to address that objective, the initiative should:

- Enable innovative SMEs to develop all forms of innovation, including breakthrough innovation, and strengthen market deployment of innovative solutions;
- Foster the internationalisation of European innovative SMEs;
- Connect national programmes to unlock the potential of all partners.

⁷⁶ Definition as per Article 2(47) of the [Horizon Europe Regulation](#)

While the award of a grant to continue the Partnership in accordance with this call should be based on a proposal submitted by the coordinator of the consortium funded under European Partnership on Innovative SMEs and the additional activities (which may include additional partners) to be funded by the grant should be subject to an evaluation, this evaluation should take into account the existing context and the scope of the initial evaluation as relevant, and related obligations enshrined in the grant agreement.

Taking into account that the present action is a continuation of the topics HORIZON-EIE-2021-INNOVSMES-01-01 and HORIZON-EIE-2023-INNOVSMES-01: European Partnership on Innovative SMEs, which entails an amendment to an existing grant agreement, the proposal should also include as an Annex the additional activities (including additional partners) to be covered by the amendments to the grant agreement.

Type and range of activities

A main activity is to run calls for proposals, organise the evaluation process and enable collaborative cross-border research and innovation projects. Beyond providing funding to innovative SMEs for cross-border research and innovation (R&I) collaboration, the calls should include further promotion of the programme in underrepresented Member States, including but not limited to, dissemination events, mutual learning seminars or roadshows.

Accompanying measures such as INNOWIDE should be included in the proposal.

Expected partner composition and geographical coverage

- National administrations and National Funding Bodies (NFBs).

The private sector and research actors would need to be mainly drawn from the activities of the national and/or regional funding organisations. The effort, networks and judgements of these organisations are key to initiate cross-border research collaborations, to help prepare applications and to fund successful participants. The success of the initiative depends largely on these organisations.

A dedicated implementation structure may notably support them through various activities and services such as to organise calls, manage funding, monitor payments and projects and implement dissemination events, roadshows, matchmaking events, webinars etc.

The initiative should have an extended geographical coverage beyond Member States and Associated Countries, and the potential to evolve towards a global programme under Horizon Europe, including through possible involvement of additional partners during the lifetime of the programme. Third countries are welcome to participate in the Partnership in line with the standard criteria related to co-funded Partnerships in Horizon Europe. The initiative should promote the ambition towards more projects involving other partners than those in geographical proximity and the sufficient utilisation of the potential of the extended Eureka network.

Types and levels of contributions from partners

Proposals should mobilise the necessary financial resources from participating national (or regional) research programmes with a view to implementing joint calls for transnational proposals resulting in grants to third parties.

Member States are invited to maximise the financial support provided to innovative SMEs through increased national funding during the selection process.

International dimension

Proposals should focus on supporting international projects led by innovative SMEs. They should enable international cooperation, enabling small businesses to learn, combine and share expertise and benefit from working beyond national borders.

In line with the ambitions of the Partnership to foster international collaboration and the provisions of the model grant agreement, projects involving one legal entity established in a Member State or Associated Country as beneficiary and one legal entity established in a non-associated third country as partner may be supported in the same manner as under Eurostars 2. As per Horizon Europe rules, projects with no participants from Member States or Associated Countries are not eligible for participation in the Partnership. At least two thirds (67%) of the projects supported must involve at least two beneficiaries from Member States or Associated Countries.

Synergies

Focussing on helping European innovative SMEs to grow and successfully embed in international markets and value chains by developing methodologies and technologies, the Partnership is expected to collaborate closely with other relevant European Partnerships, missions and the European Innovation Council in order to ensure coherence and complementarity of activities. Proposals must describe the methodology for their collaboration and the aims to achieve with this kind of collaboration.

It is encouraged to collaborate closely with Regional Innovation Valleys, EIT and KICs exploring synergies along the SME innovation and development pathways, EEN supporting info-days and partner-finding for different calls.

Other actions not subject to calls for proposals

1. European Assistance For Innovation Procurement

The New European Innovation Agenda highlights the need to stimulate the uptake of innovation procurement and recognizes the existing European Assistance for Innovation Procurement as a key initiative in this context⁷⁷. European Council Conclusions call for further improving in-depth knowledge and experience of public buyers, policy makers, companies and other key stakeholders on innovation procurement⁷⁸. The European Assistance For Innovation Procurement can contribute to achieve these goals.

This action funds a service contract for implementing the European Assistance For Innovation Procurement for the period 2026 - 2029, inspired by the activities of the existing European Assistance For Innovation Procurement and extending its scope. The tasks include updating the innovation procurement toolkit for procurers with new guidance and good practice examples, running the Q&A helpdesk, organizing workshops with procurers, policy makers, companies and other stakeholders and providing local assistance to public buyers across the EU Member States and Horizon Europe Associated Countries to kickstart new innovation procurements across all sectors in which public buyers are active.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Third quarter of 2025

Indicative budget: EUR 1.00 million from the 2025 budget

2. Benchmarking of national policy frameworks and investments on innovation procurement across Europe

European Council Conclusions call on policy makers to strengthen the policy support for innovation procurement and to encourage public buyers to increase investments in innovation procurement.⁷⁹ The New European Innovation Agenda highlights the importance of continuing the benchmarking of national policy frameworks and investments for innovation procurement across Europe. It provides a better understanding of what is the status across different countries of the implementation of policy measures that create a conducive ecosystem for innovation procurement, what are current levels of investment in innovation

⁷⁷ COM(2022)332 committed to establish specialist advisory services for innovation procurement and the associated SWD(2022)187 final recognised in this context the European Assistance For innovation Procurement (www.eafip.eu)

⁷⁸ 23 May 2024 Council Conclusions on Strengthening knowledge valorisation as a tool for a resilient and competitive industry and for strategic autonomy in an open economy in Europe: <https://data.consilium.europa.eu/doc/document/ST-10182-2024-INIT/en/pdf>

⁷⁹ 23 May 2024 Council Conclusions on Strengthening knowledge valorisation as a tool for a resilient and competitive industry and for strategic autonomy in an open economy in Europe: <https://data.consilium.europa.eu/doc/document/ST-10182-2024-INIT/en/pdf>

procurement across different sectors, what are good practices versus remaining barriers and how can they be overcome.

This action funds a service contract for implementing the benchmarking for the years 2027 and 2028. Regularly taking stock in a comparable way across Europe of the progress that different countries are making on innovation procurement, will enable policy makers to learn from each other to continue improving their performance and will help innovative companies that want to grow their business across borders to understand better the situation on innovation procurement in other countries.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Last quarter of 2025

Indicative budget: EUR 0.85 million from the 2025 budget

3. Studies and communication

Activities under this action should support the Commission with appropriate expertise in preparation of new policy initiatives in support of innovation ecosystems. These activities may include studies, support and communication activities that are needed to analyse and enhance the EU R&I environment. Contracts under this action may be implemented on the basis of framework contracts, in order to further ensure that the Commission is provided with appropriate and timely analyses.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Second quarter of 2025 and first quarter of 2026

Indicative budget: EUR 0.50 million from the 2025 budget

4. Use of individual experts on assisting with the monitoring of actions

This action will support the use of appointed independent experts for the monitoring of running actions (grant agreement, grant decision, public procurement actions, financial instruments) funded under Horizon Europe and previous Framework Programmes and where appropriate include ethics checks, as well as compliance checks regarding the Gender Equality Plan eligibility criterion.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative budget: EUR 0.20 million from the 2025 budget

5. Use of individual experts in support of the EIC FORUM

The European Innovation Council (EIC) Forum provides a platform for fostering collaboration among stakeholders within Europe's innovation ecosystems. It promotes the exchange of information, knowledge, talent, and best practices to unlock the full potential of innovation across the region. By working closely with member states, associated countries, and various stakeholders, the Forum aims to enhance framework conditions for innovation. Through engagement with relevant Directorates Generals (DGs) from the European Commission, the Forum encourages a cohesive and inclusive approach to policy and instrument development, driving sustainable growth and competitiveness within the European Union's innovation landscape.

Experts will provide intelligence in support of the work of the EIC Forum and/or its working groups. Their aim will be to gather new or more robust evidence and / or to produce analyses in support of policy discussions.

A special allowance of EUR 450 in the form of a daily unit cost for each full working day spent will be paid to the individual experts appointed in their personal capacity who act independently and in the public interest.

In other cases where expertise required that goes beyond an individual expert acting in its personal capacity, a public procurement may be used.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative budget: EUR 0.17 million from the 2025 budget

6. EUREKA membership fee

The European Union is a member of EUREKA and, as such, pays an annual contribution to the budget of the EUREKA Secretariat.

EUREKA is an international network established in 1985 as an agreement between 18 countries to foster European competitiveness and integration and to encourage Research & Development cooperation. Since then, it expanded to include over 45 countries in Europe and beyond who share the same goals and have national funding available to organisations who apply through our programmes.

Type of Action: Subscription action

Indicative timetable: First quarter of 2025

Indicative budget: EUR 0.33 million from the 2025 budget

Budget⁸⁰

	Budget line(s)	2025 Budget (EUR million)	2026 Budget (EUR million)	2027 Budget (EUR million)
Calls				
HORIZON-EIE-2025-01		40.00	40.00	28.00
	<i>from 01.020302</i>	<i>40.00</i>	<i>40.00</i>	<i>28.00</i>
HORIZON-EIE-2025-02		40.00		
	<i>from 01.020302</i>	<i>40.00</i>		
HORIZON-EIE-2026-01		14.50		
	<i>from 01.020302</i>	<i>14.50</i>		
Other actions				
Public procurement		2.35		
	<i>from 01.020302</i>	<i>2.35</i>		
Expert contract action		0.38		
	<i>from 01.020302</i>	<i>0.38</i>		
Subscription action		0.33		
	<i>from 01.020302</i>	<i>0.33</i>		
Estimated total budget		97.55	40.00	28.00

⁸⁰

The budget figures given in this table are rounded to two decimal places.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

EN

Horizon Europe

Work Programme 2025

11. Widening participation and strengthening the European Research Area

IMPORTANT NOTICE:

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

This draft is made public before the adoption of the work programme to provide potential participants with the currently expected main lines of this work programme. Only the adopted work programme will have legal value.

The adoption of the work programme will be announced on the Horizon Europe website and on the Funding and Tenders Portal.

Information and topic descriptions indicated in this draft may not appear in the final work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

The Commission expressly disclaims liability for any future changes of the content of this document.

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Introduction

This part of the Horizon Europe Work Programme 2025 addresses the area “Widening participation and strengthening the European Research Area” (WIDERA). The work programme includes two components:

I: Widening participation and spreading excellence;

II: Strengthening the European Research Area (ERA) by reforming and enhancing the European research and innovation system.

The European Commission adopted **the Communication on a New ERA for Research and Innovation** (2020) to improve the European research and innovation (R&I) landscape, to accelerate the European Union's transition towards climate neutrality and digital leadership, to support recovery from the coronavirus crisis, and to strengthen resilience against future crises¹. **The Communication on the implementation of the ERA** (2024) takes stock of the progress made since 2020 and highlights areas for further action to achieve the objectives of the ERA².

Complementing the ERA Communication, **the Commission Communication on a New European Innovation Agenda** (2022) aims at mastering the twin green and digital transitions by fostering innovation in rapidly evolving fields, bridging the innovation gap between Member States and between regions, and harnessing the potential of all actors in innovation ecosystems while developing and attracting talents³. Furthermore, **the European strategy for universities** (2022) stresses that excellent education, research and innovation environments are an enabler for developing high-level skills, creating breakthrough knowledge and translating it into practical applications⁴.

Aligned with the **Competitiveness Compass** (2025), the ERA sets sights on a single, borderless market for research, innovation and technology across the European Union, that fosters Europe's competitiveness and accelerates the green and digital transitions⁵. It helps Member States to act more effectively together by aligning their research policies and programmes. The free circulation of researchers and knowledge enables better cross-border cooperation, building of critical mass and continent-wide competition. It also promotes inclusive gender equality, ethics, mobility, skills and career development opportunities within the European Union.

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52020DC0628&from=EN>.

² https://research-and-innovation.ec.europa.eu/document/download/1bde0a38-7c86-4e6c-a4b8-7f9605d9e7e7_en?filename=com_2024_490_en.pdf

³ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022DC0332>.

⁴ <https://education.ec.europa.eu/sites/default/files/2022-01/communication-european-strategy-for-universities.pdf>.

⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52025DC0030>.

The Pact for Research and Innovation in Europe (Pact for R&I, 2021) demonstrates Member States' commitment to the ERA⁶. It defines priority areas for joint action, sets out ambitions for investments and reforms, and introduces simplified coordination and monitoring. It also outlines common values and principles to guide research and innovation in the European Union and its collaboration with the rest of the world.

The 2025 WIDERA work programme calls and other actions are designed to contribute toward the implementation of the four priority areas of the Pact for R&I:

Priority I: Deepening a truly functioning internal market for knowledge;

Priority II: Taking up together the green transition and digital transformation and other challenges with impact on society, and increasing society's participation in the ERA;

Priority III: Enhancing access to R&I excellence across the Union and enhancing interconnections between innovation ecosystems across the Union;

Priority IV: Advancing concerted R&I investments and reforms.

The component **“Widening participation and spreading excellence”** aims to tackle the R&I gap to move towards a truly integrated and cohesive R&I ecosystem in the European Union, addressing especially the third priority area of the Pact for R&I. Disparities between leading and less advanced countries in terms of R&I performance should be tackled through structural policy reforms at national and regional level aimed at, for example, improving the attractiveness of research careers, internationalisation, effectiveness of management and governance of R&I institutions or matching activities with EU initiatives (e.g., Seals of Excellence). Call topics are in principle bottom-up but applicants are encouraged to take into account key aspects of the political guidelines of the next European Commission published in July 2024⁷, such as the Clean Industrial Deal, the Energy Union, digital tech diffusion, artificial intelligence, the upcoming European Life Science strategy, Union of Skills and/or start ups.

In this component, the less advanced countries eligible for hosting coordinators of widening actions are Bulgaria, Croatia, Cyprus, Czechia, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia, Slovenia and all Associated Countries with equivalent characteristics in terms of R&I performance (Albania, Armenia, Bosnia & Herzegovina, Faroe Islands, Georgia, Kosovo⁸, Moldova, Montenegro, North Macedonia, Serbia, Tunisia, Türkiye, Ukraine, and once associated Morocco), as well as the Outermost Regions (defined in Art. 349 TFEU). Hereinafter, these countries, including the Outermost Regions, will be named 'widening countries'.

The overall policy objectives of this component of the work programme are the following:

⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021H2122>.

⁷ https://commission.europa.eu/document/download/e6cd4328-673c-4e7a-8683-f63ffb2cf648_en?filename=Political%20Guidelines%202024-2029_EN.pdf.

⁸ This designation is without prejudice to positions on status and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

1. Encourage institutional reforms and transformation processes of the R&I system at national and regional level in widening countries in line with ERA principles;
2. Mobilise national investments in R&I capacity in widening countries;
3. Raise the bar for excellence of R&I actors in widening countries in partnership with outstanding European and international institutions ('win-win situation');
4. Increase number of participations and success rates of widening actors in research and innovation projects in other parts of Horizon Europe (notably in Pillars 2 and 3);
5. Promote the creation of new innovation ecosystems, interconnect and scale up existing ones by a set of measures, which include place-based and international collaboration between academia and business in widening countries;
6. Foster brain circulation, including inter-sectoral mobility for researchers and innovators and turn it into brain gain for widening countries.

The component **“Strengthening the European Research Area by reforming and enhancing the European research and innovation system”** is designed to support the implementation of the first **ERA Policy Agenda**, which outlines 20 concrete ‘ERA Actions’ for the period 2022-2024, to advance in the four priority areas defined in the Pact for R&I⁹.

This component pertains to the destination “Reforming and enhancing the European research and innovation system”, aiming to build R&I capacity at the level of institutions and ecosystems by supporting the implementation of the different ‘ERA Actions’. It also fosters the adoption of shared EU values and principles outlined in the Pact for R&I, such as evidence-informed policymaking, freedom of scientific research, societal responsibility, gender equality, equal opportunities, diversity and inclusiveness.

The WIDERA work programme also supports the key strategic orientations of Horizon Europe presented in the **Horizon Europe strategic plan 2025-2027** by building up Europe’s R&I capacity to address global challenges and boost its competitiveness¹⁰. Synergies with national, regional and other European programmes, in particular under the cohesion policy, will increase the impact of actions implemented under this work programme.

It is recalled that selected calls and other actions funded by 2025 budget are also included in the work programme 2023-2025 (amendments adopted in April 2024) in order to ensure continuity of support¹¹. In the component “Widening participation and spreading excellence”, this included the 2025 Teaming call under the destination “Improved access to excellence” and the 2025 ERA Fellowships call under the destination “Attracting and mobilising the best talents”. In the component “Strengthening the ERA by reforming and enhancing the European research and innovation system”, a small number of actions not subject to calls for proposals

⁹ https://commission.europa.eu/system/files/2021-11/ec_rtd_era-policy-agenda-2021.pdf.

¹⁰ <https://data.europa.eu/doi/10.2777/092911>.

¹¹ https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2023-2024/wp-11-widening-participation-and-strengthening-the-european-research-area_horizon-2023-2024_en.pdf

were included, such as the 2025 edition of the EU Award for Gender Equality Champions and the 2025 edition of the European Union Contest for Young Scientists¹².

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¹² The amended work programme 2023-2024 included the 2024 Horizon Impact Award contest, which was cancelled and therefore no prizes were awarded.

Calls

Call - European Excellence Initiative (EEI)

HORIZON-WIDERA-2025-01

Overview of this call¹³

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁴	Indicative number of projects expected to be funded
		2025		
Opening: 08 May 2025 Deadline(s): 20 Nov 2025				
Destination: Improved access to Excellence				
HORIZON-WIDERA-2025-01-ACCESS-01: European Excellence Initiative (EEI)	CSA	80.00	2.00 to 5.00	27
Overall indicative budget		80.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.

¹³ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹⁴ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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Widening participation and strengthening the European Research Area

<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - EIC pre-accelerator - Widening

HORIZON-WIDERA-2025-02

Overview of this call¹⁵

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million) 2025	Expected EU contribution per project (EUR million) ¹⁶	Indicative number of projects expected to be funded
Opening: 12 Jun 2025 Deadline(s): 18 Nov 2025				
Destination: Improved access to Excellence				
HORIZON-WIDERA-2025-02-ACCESS-01: EIC pre-accelerator - Widening	CSA	20.00	0.30 to 0.50	50
Overall indicative budget		20.00		

General conditions relating to this call

¹⁵ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹⁶ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Horizon Europe - Work Programme 2025
Widening participation and strengthening the European Research Area

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Hop-on facility

HORIZON-WIDERA-2025-03

Overview of this call¹⁷

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁸	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025 Deadline(s): 04 Sep 2025				

¹⁷ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹⁸ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Horizon Europe - Work Programme 2025
Widening participation and strengthening the European Research Area

Destination: Improved access to Excellence				
HORIZON-WIDERA-2025-03-ACCESS-01: Hop-on facility	RIA	40.00	0.20 to 0.60	90
Overall indicative budget		40.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Support for R&I policy making in the EU enlargement countries

HORIZON-WIDERA-2025-04

Overview of this call¹⁹

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution	Indicative number of
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¹⁹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

Horizon Europe - Work Programme 2025
Widening participation and strengthening the European Research Area

		2025	per project (EUR million) ²⁰	projects expected to be funded
<p style="text-align: center;">Opening: 06 May 2025 Deadline(s): 16 Sep 2025</p>				
Destination: Improved access to Excellence				
HORIZON-WIDERA-2025-04-ACCESS-01: Support for R&I policy making in the EU enlargement countries	CSA	3.00	Around 3.00	1
Overall indicative budget		3.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Implementing co-funded action plans for connected regional innovation valleys in widening countries

HORIZON-WIDERA-2025-05

²⁰ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Overview of this call²¹

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ²²	Indicative number of projects expected to be funded
		2025		
Opening: 14 May 2025 Deadline(s): 15 Oct 2025				
Destination: Improved access to Excellence				
HORIZON-WIDERA-2025-05-ACCESS-01: Implementing co-funded action plans for connected regional innovation valleys in widening countries	COFUND	24.00	5.00 to 8.00	4
Overall indicative budget		24.00		
General conditions relating to this call				
Admissibility conditions	The conditions are described in General Annex A.			
Eligibility conditions	The conditions are described in General Annex B.			
Financial and operational capacity and exclusion	The criteria are described in General Annex C.			
Award criteria	The criteria are described in General Annex D.			
Documents	The documents are described in General Annex E.			

²¹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

²² Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Enhancing the European R&I system

HORIZON-WIDERA-2025-06

Overview of this call²³

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ²⁴	Indicative number of projects expected to be funded
		2025		
Opening: 15 May 2025 Deadline(s): 18 Sep 2025				
Destination: Reforming and enhancing the European research and innovation system				
HORIZON-WIDERA-2025-06-ERA-01: Rolling out the ERA Policy Agenda results	CSA	26.00	1.50 to 2.00	13
HORIZON-WIDERA-2025-06-ERA-02: Enable sustained coordination and guidance at the European level on institutional non-profit open access publishing	CSA	2.00	Around 2.00	1
HORIZON-WIDERA-2025-06-ERA-03: Research and innovation to provide evidence that support reforms of research assessment	RIA	2.00	Around 2.00	1

²³ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

²⁴ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Horizon Europe - Work Programme 2025
Widening participation and strengthening the European Research Area

HORIZON-WIDERA-2025-06-ERA-04: Investigating and addressing career barriers faced by underrepresented and marginalised researchers	RIA	2.00	Around 2.00	1
HORIZON-WIDERA-2025-06-ERA-05: Programme-level collaboration	CSA	4.00	Around 2.00	2
HORIZON-WIDERA-2025-06-ERA-06: Strengthening of the European Science for Policy Ecosystem	CSA	2.00	Around 2.00	1
HORIZON-WIDERA-2025-06-ERA-07: Science comes to town 2027	CSA	6.00	Around 6.00	1
Overall indicative budget		44.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Destination: Improved access to Excellence

Introduction

The ERA Communication established the need to improve access to excellence as one of the four main strategic goals. Striving towards excellence requires a stronger R&I system where best practice is disseminated faster across the European Union.

The European Union's R&I system needs to promote a more inclusive approach in which all can participate and from which all can benefit. Existing disparities between R&I leading and lagging countries should be tackled by introducing structural policy reforms. Closer links between research and innovation and institutional cooperation to produce high-quality knowledge are key to help bridge these disparities. By building on their excellence pockets and connecting them to broader networks of excellence less R&I advanced countries will be able to upgrade their R&I systems, making them stronger and allowing the European Union as a whole to advance together.

This destination will address “improving access to excellence” through a portfolio of complementary actions that aim to build up R&I capacities in widening countries, as well as through national and regional R&I reforms and investments, to enable them to advance to the competitive edge at European and international level. It will contribute to the development of a pan European innovation ecosystem and thus to innovation.

The **European Excellence Initiative (EEI)** addresses disparities in the performance of the European university sector by raising the overall level of excellence of research undertaken in higher education entities in European University alliances and beyond with a centre of gravity in widening countries.

The **EIC Pre-accelerator** call aims to boost the innovation potential of early-stage deep-tech startups in widening countries by enhancing their business, investor, and technology readiness to secure funding from the EIC Accelerator or other sources. The goal is to increase the competitiveness and investment appeal of these startups, facilitating their scale-up and market entry.

A call on **Implementing co-funded action plans for connected regional innovation valleys in widening countries** will improve the engagement of widening actors with the New European Innovation Agenda's flagship on *accelerating and strengthening innovation in European Innovation Ecosystems across the EU and addressing the innovation divide*. This action is intended to create connected regional innovation valleys across the European Union, with special focus on regions within the country group with lower research and innovation performance (widening countries).

The **Hop-on Facility** will open the opportunity for new participants from widening countries to join ongoing RIA projects under pillar 2 and the EIC pathfinder projects of Horizon Europe that have not yet any partner from a widening country.

The **Policy Platform for enlargement countries** will ensure continuation of the ongoing initiative for policy support to the Western Balkan countries and extend its geographical scope to enlargement countries.

In addition, particular attention will be paid to cross-cutting objectives set for Horizon Europe, such as gender equality and open science practices, through the different funded actions.

Expected impact

Proposals for topics under this destination should set out a credible pathway to contributing to improved access to excellence, and more specifically to one or several of the following impacts:

- Increased science and innovation capacity for all actors in the R&I system in widening countries;
- Mobilisation of national and EU resources for strategic investments;
- Higher participation success in Horizon Europe;
- Raised excellence of research undertaken in the higher education sector in widening countries;
- More inclusive consortia under pillar 2 and EIC pathfinder;
- Improved business opportunities for deep tech SMEs and start ups in widening countries
Interconnected, inclusive, and more efficient innovation ecosystems across the European Union;
- Greater involvement of regional actors in the R&I process;
- Improved outreach to international level for all actors;
- Improved innovation culture and opportunities for start-ups and SMEs in widening countries.

Proposals are invited against the following topic(s):

HORIZON-WIDERA-2025-01-ACCESS-01: European Excellence Initiative (EEI)

Call: European Excellence Initiative (EEI)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 2.00 and 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 80.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>In order to achieve the expected outcomes, participation as coordinators to the call is limited to legal entities established in Widening countries.</p> <p>Applications must be submitted by a consortium, including as beneficiaries, at least three independent legal entities, in three different EU Member States or Horizon Europe Associated Countries.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The following rules for dealing with ex-aequo applications apply: in the first place, ex-aequo proposals will be prioritised according to geographical diversity criteria, defined as proposals with coordinators established in a Widening Country, not otherwise represented as coordinator higher up the ranking list. The method described in Points 1), 2), 3) and 5) of General Annexes Part F (Procedure/Evaluation procedure and ranking) will then be applied to the remaining equally ranking proposals in the group. This rule establishing the priority order serves to better spread the impact of the action and to strengthen the efficiency of the ‘Widening participation and spreading excellence’ programme.</p>

Expected Outcome: According to the recent report on the future of European competitiveness by Mario Draghi (published in September 2024)²⁵, ‘the EU boasts an excellent university system on average, but its presence among the top world-leading research universities is limited’. The EU higher education system is quite inclusive and provides a high level of education and training to a significant portion of its young people. However, there are very large differences among European universities, and some perform very well in many respects. This action addresses this challenge by dedicated measures to reduce these disparities by raising the overall level of excellence of research undertaken in higher education entities.

Furthermore, this action contributes to the implementation of the European strategy empowering higher education institutions for the future of Europe²⁶ of 5 April 2022 and the ERA Policy Agenda 2022-24²⁷; ERA action 13: Empower higher education institutions to develop in line with ERA, and in synergy with the European Education Area.

The objectives of this action are to:

²⁵ https://commission.europa.eu/topics/strengthening-european-competitiveness/eu-competitiveness-looking-ahead_en

²⁶ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AJOC_2022_167_R_0003

²⁷ <https://data.consilium.europa.eu/doc/document/ST-14308-2021-INIT/en/pdf>

- Raise excellence in science and in knowledge valorisation through deeper and geographically inclusive strategic cooperation in alliances of higher education institutions, such as – but not limited to – European Universities alliances selected under Erasmus+, with a center of gravity in Widening countries;
- Improve global competitiveness and visibility of Europe’s higher education institutions, creating critical mass in key strategic areas stipulated in the political guidelines for the next European Commission published in July 2024²⁸ such as the Clean Industrial Deal, the Energy Union, digital tech diffusion, artificial intelligence, the upcoming European Life Science strategy, Union of Skills, etc.;
- Improve researchers career opportunities in line with the ERA policy agenda 2022-24, promoting a balanced circulation of talents, fair and modern research assessment practices in line with the Agreement on Reforming Research Assessment²⁹, diversity, gender equality and inclusiveness, use of open science practices as well as the acquisition of transferable skills.

Proposals are expected to contribute to the following outcomes:

- Modernisation and upgrade of higher education institutions in the R&I dimension, through integrated collaboration between institutions and with other actors in local ecosystems and/or internationally;
- Mainstreamed culture of excellence in science and knowledge valorisation amongst higher education institutions, and particularly in less research-intensive institutions and countries, in particular Widening countries;
- Accelerated institutional reforms in the R&I dimension and strengthened R&I capacities in higher education institutions, notably those located in Widening countries, in particular leading to better research careers including in non-academic sectors;
- Strengthened digital skills and capacities including artificial intelligence of the R&I dimension of the higher education sector;
- Increased global competitiveness and critical mass of research in the European higher education system;
- Contribution to implementation of the relevant ERA Policy Agenda 2022-24 actions in higher education sector (Action 13: Empower higher education institutions and actions 1 to 9 under the header ‘Deepening a truly functioning internal market for knowledge’, where relevant).

²⁸ https://commission.europa.eu/document/download/e6cd4328-673c-4e7a-8683-f63ffb2cf648_en?filename=Political%20Guidelines%202024-2029_EN.pdf

²⁹ https://coara.eu/app/uploads/2022/09/2022_07_19_rra_agreement_final.pdf

Scope: The European Excellence Initiative in its widening dimension aims to raise excellence in science and in knowledge valorisation of Europe's universities through cooperation. The action will engage with universities and empower them further to be actors of change in R&I.

By developing closer cooperation with economic and industrial partners within local and regional innovation ecosystems, academic researchers and support staff will be provided the opportunity to be trained in knowledge valorisation, entrepreneurship, access to finance, at any stage of their careers, and to take into account the variety of academic activities in their career assessment.

Cooperation of universities will be supported to create critical R&I mass and pursue specific objectives that contribute to accelerating key R&I areas of own choice with strategic relevance for the European Union.

The European Excellence Initiative in its widening dimension is, in terms of scope, open to any network or alliance of higher education institutions, such as – but not limited to – European Universities alliances selected under Erasmus+. In case of participation in this call such alliances may be represented by limited number of their members and may include entities outside the alliance for specific themes to pursue the objectives of this call especially in view of industrial co-operation and/or outreach to regional innovation ecosystems. Under this call the centre of gravity of the action is in Widening countries. Applicants are expected to convincingly demonstrate this geographical focus conceptually and by allocation of the major share of the budget (at least 51%) to participants from Widening countries.

Activities need to focus on research and innovation conducted in the higher education sector. Educational activities such as Master or doctoral programmes are out of scope of this call.

Projects should contribute to the implementation of ERA Policy Agenda priorities at the participating higher education institutions, notably the strengthening of research careers in academia and the reform of the assessment system for research and related careers;

Applicants are encouraged to implement the aforementioned European Research Area policy objectives and to consolidate institutional changes by means of a coherent package of activities structured into the following modules (underpinned with non-exhaustive examples of related activities):

1. Institutional modernisation and reforms

- Introduction of modern research assessment practices, in line with the Coalition for Advancing Research Assessment (CoARA);
- Application of modern management practices including improved research management and administration (RMA);
- Promoting interdisciplinary research entities.

2. Upskilling of research, technical and management staff

- Exchange of academic and non-academic staff for sharing good practices;
- Training and capacity building for research and innovation management including IPR and application of open science practices;
- Entrepreneurial and communication training.

3. Development of research excellence

- Sharing R&I capacities including infrastructures;
- Developing joint strategic R&I agendas;
- Seed R&I projects to test R&I agendas, explore new joint research stands and consolidate partnership.

4. Digital transformation

- Introduction of AI techniques in science and management;
- Concept studies for upgrading digital infrastructure;
- Data science and management.

5. Outreach

- Linkages with inspiring local/regional innovation ecosystems including industry;
- Engaging with citizens, cities, regions and other non-academic actors;
- Development of internationalisation strategies and partnerships.

Proposals should address at least four of the above modules and may propose concrete activities different to the examples given in the list above as long as they are in line with the objectives of this call.

Expenditures for research and innovation activities (see third activity under point 3, such as seed funding for collaborative research projects) cannot exceed a maximum of 20% of the total budget and need to be presented in a dedicated and distinct work package in the proposal.

The actions should envisage a duration appropriate to the ambition and complexity of the alliance of higher education institutions. The duration should not exceed 5 years.

HORIZON-WIDERA-2025-02-ACCESS-01: EIC pre-accelerator - Widening

Call: EIC pre-accelerator - Widening
Specific conditions

Horizon Europe - Work Programme 2025
Widening participation and strengthening the European Research Area

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 0.30 and 0.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Applications may only be submitted by one legal entity (mono-beneficiary).</p> <p>The following additional eligibility criteria apply:</p> <p>Beneficiaries must be a small and medium enterprise (SME) established in a Horizon Europe Widening country.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The following additions to the general award criteria apply:</p> <p>The proposals will be evaluated by 3 independent evaluators following the award criteria for EIC Transition Open at first evaluation step, EIC Work Programme 2025³⁰. These are:</p> <p>Excellence (Threshold: 4/5)</p> <p>Technological breakthrough: Does the technology have a high degree of novelty and higher performance compared to other technologies available or in development? Does the technology indicate high commercial potential?</p> <p>Objectives: How credible and feasible are the objectives for the planned technology development and maturation? How credible and feasible are the objectives and KPIs for the planned business development process?</p> <p>Methodology: Is the timing right for this technology/innovation (i.e., feasibility, minimum technological readiness level (TRL), unique selling points)?</p> <p>Impact (Threshold: 4/5)</p> <p>Credibility of the impacts: To what extent the expected commercial impact(s) described in the proposal are credible and substantial within</p>

	<p>the project and beyond (e.g., one or several sectors, setting new standards, etc.)?</p> <p>Economic and/or societal benefits: To what extent does the proposed innovation have scale up potential including high capacity to gain or create new European or global markets? To what extent is the proposed innovation expected to generate positive impacts for the European Union, Member States or Associated Countries (e.g., strategic autonomy, employment etc.)?</p> <p>Investment readiness and go to market strategy: To what extent the proposal and its activities contribute to make the technology and the team investment ready (including through IP protection and market validation)? Is there a well-defined and convincing go-to -market strategy and pathway, including what regulatory approvals may be needed (if relevant), time to market, possible business and revenue model?</p> <p>Quality and efficiency of the implementation (Threshold 3/5)</p> <p>Quality and motivation of the team: To what extent does the (project) team have the necessary high-quality capabilities and high motivation to move decisively towards market. To what extent does the applicant have the necessary expertise to create a unique commercial value from the emerging technology and develop an attractive business and investment proposition?</p> <p>KPIs and Milestones: Are both milestones and KPIs present, relevant and clearly defined (measurable, timed, comparable etc.) to track progress along the pathway towards objectives? Have the main risks (e.g., technological, market, financial etc.) been identified, together with measures to mitigate in order to achieve the project objectives?</p> <p>Workplan and allocation of resources: How appropriate and effective is the allocation of resources (person-months and equipment) between work packages?</p> <p>The following rules for dealing with ex-aequo applications apply: in the first place, ex-aequo proposals will be prioritised according to geographical diversity criteria, defined as proposals with coordinators established in a Widening Country, not otherwise represented as coordinator higher up the ranking list. The method described in Points 1), 2), 3) and 5) of General Annexes Part F (Procedure/Evaluation procedure and ranking) will then be applied to the remaining equally ranking proposals in the group. This rule establishing the priority order serves to better spread the impact of the action and to strengthen the</p>
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	efficiency of the ‘Widening participation and spreading excellence’ programme.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>Seals of Excellence will be awarded to applications exceeding all of the evaluation thresholds set out in this work programme but which cannot be funded due to lack of budget available to the call.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>The funding rate is 70 % of the eligible costs.</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ³¹.</p>

Expected Outcome: This call will increase the innovation potential of deep-tech startups in the widening countries and enable them to better attract private investments and scale up. It will further strengthen the innovation dimension of the widening component and increase the overall competitiveness of these countries.

The specific outcome expected of this action is increased business, investor, and technology readiness of high potential deep-tech startups in widening countries to a level where they will:

1. be successful in applying and attracting the EIC Accelerator funding and/or;
2. manage to secure other private investment and/or;
3. attract successfully national or regional funding as alternative funding sources (e.g. through Seal of Excellence programmes).

Scope: This action focuses on early-stage deep-tech startups which 1) have high-impact innovation technology, product, service, or business model that could create new markets or disrupt existing ones, and 2) have the ambition and commitments to scale up.

The successful applicants need to work on deep tech innovation. Such companies often struggle to attract financing because the technology and investment risks are too high.

³¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

In the framework of this call, **deep-tech**³² is technology that is based on cutting-edge scientific advances and discoveries and is characterised by the need to stay at the technological forefront by constant interaction with new ideas and results from the lab. Deep-tech innovations are understood to be those that have the potential to deliver transformative solutions, rooted in cutting-edge science, technology, and engineering, including innovation that combines advances in the physical, biological and digital spheres. Deep-tech is distinct from ‘high-tech’ which tends to refer only to R&D intensity³³.

This EIC Pre-accelerator - Widening call is designed to enable promising deep-tech startups to develop further their innovations (from TRL 4 to TRL 5/6)³⁴, attract the investment amounts needed for scale up in a shorter timeframe and successfully apply and attract funding from EIC Accelerator or other sources.

The applicants are expected to demonstrate in their application that they:

- have developed technology validated in the lab (at least TRL 4);
- possess the necessary Intellectual Property Rights to ensure freedom to operate and adequate protection of the idea;
- have a clear vision on the intended pathway and route to market. This includes specific milestones together with concrete and verifiable KPIs to assess progress towards the market.

The support will be awarded by grants max at 70% funding of the eligible costs. 30% co-funding to be covered by the beneficiary through its own resources.

An amount between EUR 300.000 and max EUR 500.000 in the form of a lump sum for a period of up to 2 years is considered appropriate.

Seal of Excellence will be awarded to all proposals that meet the evaluation thresholds but are not funded due to lack of available budget.

The requested grant is expected to be used for:

- addressing the investor and market readiness towards commercialisation and deployment (market research, value proposition, business case and business model, prospects for growth, intellectual property protection, competitor analysis etc.) and if relevant, aspects of regulation, certification and standardisation, aimed at getting both the technology and the business idea investment ready **and/or**;

³² Deep-tech ventures have the following characteristics: positioning at the knowledge frontier with long and uncertain R&I cycles; relates to tangible products and industrialisation processes; linked to the ecosystem and especially higher education institutions, problem orientated, or mission driven, focused on the creation of an option space and a dynamic de-risking cycle.

³³ Ratio of a firm's R&D investment to its revenue.

³⁴ Completed TRL 5 (Technology validated in relevant environment – industrially relevant environment in the case of key enabling technologies) or TRL6 (Technology demonstrated in relevant environment - industrially relevant environment in the case of key enabling technologies). For more information, see [EIC Work Programme 2025](#).

- the maturation and validation of novel technologies beyond proof of concept to viable demonstrators of the technology in the intended field of application (i.e., from minimum TRL 4 up to TRL 6).

At the end of the EIC Pre-accelerator project, it needs to:

- demonstrate that the technology component of their innovation has been tested and validated in a laboratory and other relevant environment (e.g. at least completed all aspects of TRL 5);
- be ready to apply for EIC Accelerator and/or to seek other investors or sources of funding, to enter licensing or collaboration agreements with third parties, or other routes to market deployment.

Successful applicants and those awarded the Seal of Excellence will be granted free access to the EIC Business Acceleration Services³⁵, such as coaching and specific events tailored to their needs (e.g. for improving investor and market readiness).

This will be complemented by access to the EIC Accelerator Fast Track³⁶ for submissions to the Accelerator programme following a project review in the second half of the project.

HORIZON-WIDERA-2025-03-ACCESS-01: Hop-on facility

Call: Hop-on facility	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 0.20 and 0.60 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <ol style="list-style-type: none"> 1. The proposal must include only: <ul style="list-style-type: none"> • One legal entity, as a beneficiary, established in a Widening country. • One legal entity which is the coordinator of an ‘eligible already

³⁵ See EIC Work Programme 2025. More information is available also here: https://eic.ec.europa.eu/eic-funding-opportunities/business-acceleration-services_en.

³⁶ See Annex 3 Fast Track scheme to apply for the EIC Accelerator, [EIC Work Programme 2025](#).

	<p>funded action'.</p> <p>2. The proposal must be submitted by the coordinator of the 'eligible already funded action'. No more than 10% of the maximum grant amount can be allocated to the coordinator as a coordination fee for the integration of the new widening beneficiary. No less than 90% of the max grant amount must be allocated to the Widening beneficiary.</p> <p>An 'eligible already funded action' refers to an action stemming from a Horizon Europe grant agreement that also meets the following conditions:</p> <ol style="list-style-type: none"> 1. No legal entity established in a Widening Country is already a beneficiary, affiliated entity or associated partner in the Horizon Europe grant agreement. 2. At the time of submission of the proposal (and for any grant agreement signature), the granting authority of the Horizon Europe grant agreement is the European Commission or an Executive Agency. 3. The Horizon Europe grant agreement was awarded to Horizon Pillar II 'main' Work Programme or EIC Pathfinder collaborative R&I actions. 4. <i>The first reporting period of the Horizon Europe grant agreement is ongoing at the submission deadline. Furthermore, the ongoing grant agreement is between 1 to 12 months from its starting date by the submission deadline.</i>
<p><i>Procedure</i></p>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>In the first place, ex-aequo proposals will be prioritised according to geographical diversity criteria, defined as proposals with the additional beneficiary established in a Widening Country, not otherwise represented as a beneficiary higher up the ranking list. The method described in Points 1), 2), 3) and 5) of General Annexes Part F (Procedure/Evaluation procedure and ranking) will then be applied to the remaining equally ranking proposals in the group. This rule establishing the priority order serves to better spread the impact of the action and to strengthen the efficiency of the 'Widening participation and strengthening the European Research Area' programme.</p> <p>If the proposal is successful, the next stage of the procedure will be grant agreement amendment preparations.</p> <p>If the outcome of amendment preparations is an award decision, the coordinator of the consortium of the eligible already funded action will be</p>

	invited to submit an amendment to the grant agreement, on behalf of the beneficiaries.
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Expected Outcome: The Hop-on Facility allows for legal entities from low R&I performing countries to join already funded Horizon Pillar II ‘main’ Work Programme and EIC Pathfinder collaborative R&I actions, subject to the agreement of the respective consortium and provided that legal entities from such countries are not yet participating as beneficiary, associated partner, or affiliated entity. The scheme aims to improve the inclusiveness of Horizon Europe. Selected consortia will be invited to submit a grant agreement amendment request of the eligible already funded action.

Project results are expected to contribute to the following outcomes:

- At system level, it mobilises excellence in the Widening countries, increases visibility of the beneficiaries from the widening countries, improves knowledge circulation, and reduces lack of participation of the widening countries in specific thematic domains;
- At consortium level, it opens up established networks to new connections and partnerships, improves research excellence of the Widening country’s institutions in specific fields, enlarges outreach of the participants’ R&I actions and provides access to new talent pools;
- At the level of the Widening beneficiary, new competencies and skills for working in transnational projects including research management and dissemination and exploitation are acquired.

Scope: The Hop-on Facility integrates one additional beneficiary from a Widening country to an ongoing project under Pillar 2 or the EIC pathfinder scheme who contributes a relevant task, work package or another visible and distinguishable activity.

Applications must demonstrate the R&I added value of the new beneficiary for the eligible already selected action. The proposal should include a detailed description of the profile of the new beneficiary and its R&I role and complementarity in the existing project.

The additional beneficiary and activities should be presented in a dedicated proposal template with the Description of the Action (DoA) of the ongoing action uploaded as an annex. In case of a successful evaluation, the consortia (coordinator) of the eligible already funded action (i.e. relevant existing grant agreement) will be invited to submit an amendment request for accession of the Widening beneficiary, modification of the description of the action. If budget is reserved for the coordinator, the proposal should justify the amounts in terms of integration efforts for the new participant.

HORIZON-WIDERA-2025-04-ACCESS-01: Support for R&I policy making in the EU enlargement countries

Call: Support for R&I policy making in the EU enlargement countries	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: The coordinator must be a legal entity established in a Widening country. At least 50% of the budget must be allocated to beneficiaries established in Widening countries.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: The actions funded under this topic will provide support to national and regional R&I and education³⁷ initiatives in line with the objectives of the Widening programme component by pooling resources and contributing to the alignment of national and regional research, innovation, and education policies for the countries Albania, Bosnia and Herzegovina, Georgia, Kosovo³⁸, Moldova, Montenegro, North Macedonia, Serbia, Türkiye, and Ukraine hereinafter named enlargement countries³⁹.

Project results are expected to contribute to the following expected outcomes:

- If relevant, support the Western Balkans Steering Platforms for Research and Innovation, Education and Training, and Culture as valuable instruments of policy

³⁷ Education initiatives refer to those that contribute to further deepening and integrating in the ERA and NEIA.

³⁸ This designation is without prejudice to positions on status and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

³⁹ https://neighbourhood-enlargement.ec.europa.eu/enlargement-policy_en: Albania, Bosnia and Herzegovina, Georgia, Kosovo, Moldova, Montenegro, North Macedonia, Serbia, Türkiye, Ukraine.

dialogue with the region (incl. support to the annual Ministerial meeting of the Western Balkans Steering Platforms);

- If relevant, facilitate the implementation of the Western Balkans Agenda on Innovation, Research, Education, Culture, Youth and Sport, in line and through synergies with the Growth plan for the Western Balkans⁴⁰, the Growth Plan for Moldova⁴¹ and the Ukraine Plan⁴² as regards human capital development, including research and innovation;
- Foster the further integration of the enlargement countries into the European Research Area and into the European Innovation Area:
 - o Highlight the strategic importance of the enlargement countries and facilitating actions aiming to support the region's EU integration process, in the area of research and innovation;
 - o Aim to promote regional economic growth and prosperity through planned investments, to be directed towards game-changing innovations and actions that create a sustainable and human centric development and digital future. Support the ongoing process of reforming research and innovation eco-systems with more and better opportunities for capacity building;
 - o Contribute to the closer integration of the enlargement countries with the EU's priorities, most notably the Green Deal, the digital transformation, including, if relevant, the enhancement of ICT and digital skills along the lines of the Digital Agenda for the Western Balkans and the renewed Digital Education Action Plan with an emphasis on research and innovation, and knowledge transfer;
 - o Contribute to reducing the divide in the innovation performance with the EU through targeted actions aiming at increasing the countries' performance in the European Innovation Scoreboard;
- Provide support to the accession process and facilitate the further integration of enlargement countries into relevant European programmes;
- Identify common priorities agreed among the participating national and regional R&I eco-systems, taking into account international developments where relevant;
- Contribute to joint initiatives, resulting in the funding of regional innovation actions, design/implement a portfolio of complementary actions which would enable stakeholders from enlargement countries and policy makers to better internationalise and integrate into EU R&I actions and policy making;

⁴⁰ COM(2023) 691 final <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2023:691:FIN>

⁴¹ COM (2024) 470 final <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52024DC0470>

⁴² OM (2022) 233 final IMMC.COM%282022%29233%20final.ENG.xhtml.1_EN_ACT_part1_v6.docx

- Implement and financially support other joint activities supporting R&I, regulatory or societal uptake of results.

Scope: Research and innovation play an important role in tackling challenges but also in ensuring a sustainable and inclusive growth while boosting the resilience of production sectors, the competitiveness of economies, and the transformation of the socio-economic systems across Europe. The enlargement countries are trying to advance in the fields of Research, Development and Innovation (RDI). Closer links between research and innovation, and institutional cooperation to produce high-quality knowledge, underpinning economic and societal solutions are paramount to help bridging the R&I gap between the EU Member States and enlargement countries. Actions stemming from this call will foster capacity building efforts in enlargement countries to advance R&I eco-systems, improve the Technology Transfer Process, promote networking of and access to excellence, thus optimising the participation in and impact of Horizon Europe (and successor programme) across the region. Activities from this call will strengthen and foster the development of the human capital base in the region, they will promote the establishment of open, inclusive and responsible national research and innovation eco-systems, support institutional reform through the development of inclusive gender equality plans in line with Horizon Europe and the ERA objectives, as well as support evidence-based policy making.

Underpinning the Western Balkans Agenda on Innovation, Research, Education, Culture, Youth and Sport, this action will foster a comprehensive policy approach, while seeking synergies across the entire Horizon Europe and related EU funding programmes. An action funded under this call will support the coordination and synchronised interaction among a multitude of instruments and programmes targeting enlargement countries in the fields of R&I. This should not only facilitate an increased participation of entities from enlargement countries in relevant European funding programmes, but also create economies of scale, complementarity, synergies, and avoid overlapping of actions.

An action stemming from this topic will support a platform for the co-ordination of various services addressing research, and innovation in enlargement countries in their programming and implementation. All these areas are key for finding new solutions to the challenges we are facing across the region. The actions should also aim to support the implementation of people-to-people cooperation projects with and within enlargement countries, supporting partnerships between higher education institutions as well as creative professionals and industries and European incubation networks for creativity-driven innovation.

This action aligns with ERA and Widening objectives in that it aims to strengthen links with EU partners and opens EU networks, contributes to improving research and innovation management capacities in enlargement countries, and it supports national policy reforms through targeted actions. A key element in this is the support to the development and implementation of Smart Specialisation Strategies and macro-regional strategies in cooperation with the JRC and the Policy Support Facility.

Initiatives in the fields of research, innovation, and skills development create new opportunities, reduce the skills mismatch, support sustainable economic growth, the

competitiveness of businesses and industries and the intercultural dialogue, help to tackle climate change, enable digital transformation, and provide better public services for all Europeans.

HORIZON-WIDERA-2025-05-ACCESS-01: Implementing co-funded action plans for connected regional innovation valleys in widening countries

Call: Implementing co-funded action plans for connected regional innovation valleys in widening countries	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 24.00 million.
<i>Type of Action</i>	Programme Co-fund Action
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>This action requires the participation, as beneficiaries, of at least three (3) national or regional authorities, from at least three (3) different Member States or Associated Countries, of which at least (2) two from a widening country and one (1) from a non-widening country. The action also requires that among the national or regional authorities participating as beneficiaries, at least one (1) is from a ‘moderate’ or ‘emerging’ innovator region and at least one (1) is from a ‘strong’ or ‘innovation leader’ region.</p> <p>The co-ordinator of the project must be established in a widening country and the major share of the budget has to be allocated to participants from widening countries.</p> <p>The Regional Innovation Scoreboard is taken as a reference, and in the case of national authorities, the European Innovation Scoreboard. The applicants must use as a reference the latest version of the documents mentioned above at the time of the call opening. Associated Countries which are not included in the European Innovation Scoreboard and are ranked below 25 on the latest Global Innovation Index are considered as ‘moderate’ or ‘emerging’ innovators. In cases of Associated Countries not included in any of the previously mentioned references, the participation rank of the country in the Horizon Europe programme</p>

	<p>(Horizon Europe country profile) will be taken as a reference and countries ranked below the average will be considered as ‘moderate’ or ‘emerging’ innovators.</p> <p>The consortium must allocate at least 50% of their total eligible costs to financial support to third parties and/or to the implementation of the PCP or PPI procurements.</p> <p>The consortium must provide a single letter of intent at the moment of submission of the proposal indicating the source of the required 50% of complementary funding (e.g. national and/or regional funding, EU funding, or private investments).</p> <p>Subject to restrictions for the protection of European communication networks.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants.</p> <p>The maximum amount to be granted to each third party is EUR 600.000. This amount is justified since the cascading grants will support concrete interregional projects to be undertaken by research and innovation entities. Due to the nature of these projects (e.g. development or deployment of technological innovations) a threshold lower than EUR 600.000 would constitute an obstacle to establishing effective collaborations.</p> <p>The funding rate is 50% of the total eligible costs.</p> <p>Grants awarded under this topic will have to submit the following deliverable(s): Annual work plans subject to approval by the Commission. For the first year, the annual work plan needs to be submitted together with the respective proposal.</p>

Expected Outcome: In line with the New European Innovation Agenda’s⁴³ flagship on *accelerating and strengthening innovation in European Innovation Ecosystems across the EU and addressing the innovation divide*, this action is intended to create connected regional innovation valleys across the European Union (EU), involving regions with lower innovation performances, by building on strategic areas of regional strength and specialisation (defined in their smart specialisation strategies), in support of key EU priorities. Regions represented by successful applicant national or regional authorities under this call will be recognised as “regional innovation valleys”.

⁴³ [A New European Innovation Agenda COM\(2022\) 332 final](#)

Projects results are expected to contribute to all of the following expected outcomes:

- Efficient, inclusive and interconnected innovation ecosystems across the EU in line with the New European Innovation Agenda, building on their diversities and complementarities, enhancing the joint definition of visions and strategies, involving actors from across the quadruple helix⁴⁴, based notably on their respective national/regional smart specialisation strategies, and strengthening their efficiency and potential to innovate;
- Enhanced synergies, complementarities and cooperation among European innovation ecosystems around strategic areas, technologies and challenges of common European interest, designing projects building on Smart Specialisation Strategies and, where applicable, on the, participation in, for example, Excellence Hubs⁴⁵, Digital Innovation Hubs⁴⁶, Hubs for Circularity⁴⁷, Circular Cities and Regions Initiative⁴⁸, Climate-Neutral and Smart Cities Mission⁴⁹, Hydrogen Valleys⁵⁰, Renewable Energy Valleys⁵¹ and Industry 5.0 System Innovation Hubs⁵²;
- The creation of common knowledge assets within regional innovation valleys, and support to their cross- border connectedness; including, for example, competitive advantages to strengthen their capacity for enhanced quality of their R&I ecosystems⁵³, (e.g. biotech health security and biotech for food systems, applicability of bioeconomy sustainability principles in regional case studies, as described in the concept note on Regional Innovation Valleys for Bioeconomy and Food Systems⁵⁴);
- Increased innovation capabilities, including in deep tech, in Member States and Associated Countries, allowing innovators to bring their ideas to the market and enable innovations to be scaled up at EU level, and facilitating the link with the private sector, public and private buyers of innovative solutions and other research and innovation actors;

⁴⁴ Ecosystem quadruple helix model requires the collaboration of academia, business, regional government and societal actors.

⁴⁵ Available online: [Excellence Hubs - European Commission \(europa.eu\)](https://ec.europa.eu/excellence-hubs/)

⁴⁶ Available online: [European Digital Innovation Hubs Network \(europa.eu\)](https://ec.europa.eu/digital-innovation-hubs-network/)

⁴⁷ Available online: [Hubs4Circularity \(h4c-community.eu\)](https://h4c-community.eu/)

⁴⁸ Available online: [Circular Cities and Regions Initiative \(europa.eu\)](https://ec.europa.eu/circular-cities/)

⁴⁹ Available online: [Climate-neutral and smart cities - European Commission \(europa.eu\)](https://ec.europa.eu/climate-neutral-smart-cities/)

⁵⁰ Available online: [H2Valleys | Mission Innovation Hydrogen Valley Platform](https://h2valleys.eu/)

⁵¹ Available online: [Renewable Energy Valleys to increase energy security while accelerating the green transition in Europe \(europa.eu\)](https://ec.europa.eu/renewable-energy-valleys/)

⁵² Check upon HE adoption: [HORIZON-CL4-INDUSTRY-2025-01-HUMAN-65: Network of Industry 5.0 system innovation hubs in connected Regional Innovation Valleys \(IA\)](#)

⁵³ Available online:

⁵⁴ To check at finalization: Reference to HORIZON-CL6-2025-03-GOVERNANCE-04: Operationalisation of bioeconomy sustainability principles and [Concept of Regional Innovation Valleys for Bioeconomy and Food Systems](#)

- Better links between innovation 'leaders' and 'strong' innovator regions with 'moderate' and 'emerging' innovator regions across the EU and Associated Countries⁵⁵;
- More innovation co-investments, mobilising other funding instruments, including European, national or regional public funds and/or other private funds, to complement Horizon Europe support;
- Increased participation of all innovation ecosystems actors across EU territories in technology and industrial value chains (existing and emerging ones) relevant to the EU twin green and digital transition to achieve broader sustainability, the EU's open strategic autonomy and competitiveness⁵⁶.

Scope: The aim of this topic is to foster the creation of efficient, open, inclusive and interconnected European innovation ecosystems in line with the New European Innovation Agenda, notably in thematic/technological areas (including deep tech) that will be critical for EU value chains.

It will also contribute to the twin green and digital transition and a resilient society, and to the net-zero objective⁵⁷, particularly in the areas of reducing reliance on the fossil fuels, increasing global food security, mastering the digital transformation (including cybersecurity and Artificial Intelligence), improving healthcare, and achieving circularity.

The topic will support strategically oriented long-term programmes of activities (Annual Work Programmes) to enable authorities in charge of public national or regional innovation policies or programmes with the participation of the private sector and research and innovation actors, to implement joint activities towards innovation development and deployment, possibly including innovation procurement, aimed at tackling challenges at EU, national and regional level.

The applicants are encouraged to consider a project duration of three to five (3-5) years and proposals should:

- Present the applicants' respective commitment to enhance the coordination and directionality of their research and innovation (R&I) investments and policies, their joint strategic visions, and their proposed joint innovation programme of activities; before the proposal submission the participants should have already selected a thematic/technological area and reached an agreement on what they want to achieve, in order to be able to present concrete action plans; the plans can be further detailed on an annual basis during the implementation of the projects;

⁵⁵ References available online: [Regional Innovation Scoreboard \(RIS\)](#), [European Innovation Scoreboard \(EIS\)](#), [Global Innovation Index \(GII\)](#);

⁵⁶ Aligned with the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions "The 2024 Annual Single Market and Competitiveness Report", COM(2024)77: [EUR-Lex - 52024DC0077 - EN - EUR-Lex \(europa.eu\)](#)

⁵⁷ Available online: [The Green Deal Industrial Plan \(europa.eu\)](#)

- Describe the activities necessary, the process that will be followed, and the research and innovation assets that will be mobilised; activities should be open, clear, realistic, impact-oriented and ensure:
 - o Participation of private actors, either for the joint implementation of proposed activities, and/or their possible co-funding; for example, via links and cooperation with innovative SMEs, start-ups, industry, private entities supporting innovation and innovators, including clusters, associations, as well as investors and foundations;
 - o Complementarity and synergies with other funds (EU, public, and/or private) and innovation-related strategies/policies/programmes/plans at national and/or regional level, including their smart specialisation strategies, and where relevant, the participation in other relevant programmes. Applicants should outline the scope for synergies and/or additional funding, in particular, where this makes the projects more ambitious or increases their impact and expected results.
- Explain the need and the reasons for selecting the proposed Annual Work Programmes that should be scalable at European level and demonstrate their strong EU added value; Annual Work Programmes should:
 - o Include clear steps: (1) capacity building activities, including information exchange and common guidelines; (2) setting common strategy and joint work/action plans; (3) concrete joint activities (including staff exchange, visits, etc.); leading to (4) concrete joint innovation actions (design and implementation of joint funding programmes/calls to select interregional innovation projects).
 - o Include the provisions and modalities for the competitive selection and funding (joint open calls implemented via financial support to third parties - FSTP) of at least three interregional innovation projects in the selected thematic/technological area, including deep tech, linked to key EU priorities:
 - These interregional projects are expected to be similar to HE Innovation Actions or close to market actions (TRL 6-8) and should focus on the development and/or deployment of technologies and innovations, including breakthrough and disruptive, through cooperation between research and innovation actors from the participating regions;
 - These interregional projects can also involve the implementation of a Pre-Commercial Procurement (similar as in Horizon Europe PCP grant actions, arriving also to TRL 8) or a Public Procurement of Innovative solutions (similar as in HE PPI grant actions, arriving to TRL 8). In this case the procurements should be implemented in cooperation between public procurers from the participating regions;

- Each of these interregional projects should aim to deliver concrete and tangible outcomes during the project implementation, and ensure their dissemination and exploitation;
- These interregional projects should be managed in a coordinated manner, as a portfolio of projects, and should identify and establish links among the projects and with other relevant EU, national or regional projects in similar thematic/technological area (horizontal integration) or complementary areas (vertical integration) with a view to integrate into and contribute to existing or emerging value chains.
- o Include a consistent set of core collaborative activities, for example: networking and coordination structures and tools to facilitate innovation development and access to and sharing of best practices, resources, research/technology infrastructures, talents, markets, expertise, services or knowledge, including open and collaborative knowledge bases and common knowledge assets (methods, data, processes);
 - Support to interconnections between innovation hubs/local pockets of excellence; market analysis, development and activities towards better access to new markets and finance for innovative SMEs and start-ups;
 - Training and skills development; interconnection of open innovation infrastructures; supportive activities towards scale up, exploitation and dissemination of innovative solutions;
 - Reinforcing public and private buyers' capacity to procure innovative solutions; Networking of and assistance to public and private procurers to facilitate the implementation of joint or coordinated innovation procurement initiatives;
 - Enhancing place-based social cohesion across EU territories, through networks such as European Social Economy Regions initiative⁵⁸, including social innovators and civil society integration, as interlocutors for society and important inputs to the development of innovations and promotion of gender equality and diversity⁵⁹.
- Explain the reasons for selecting the proposed strategic areas of cooperation, and how this cooperation will improve the efficiency and performance of the EU's innovation ecosystems. The joint innovation activities should focus on a specific thematic/technological area, in line with the smart specialisation strategies of the participating regions, and should highlight how it will contribute to innovation priorities of common interest, EU strategic priorities (including green, digital and social transitions, and open strategic autonomy) and, where appropriate, Horizon Europe

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Available online : [The European Social Economy Regions \(ESER\) \(europa.eu\)](https://ec.europa.eu/eu-ropa/eu-social-economy-regions/)

⁵⁹

[Horizon Europe guidance on gender equality plans - Publications Office of the EU \(europa.eu\)](https://ec.europa.eu/eu-ropa/eu-social-economy-regions/)

Missions. It should clarify the potential for growth and competitiveness foreseen in the targeted sector and/or expected impact on EU challenge(s);

- Present and explain how the consortium plans to design and coordinate the implementation of these joint activities (e.g. resources to be mobilised, assets to be used, involvement of innovation stakeholders, such as innovation hubs, business associations, clusters, industry, startups, scaleups and SMEs);
- Include set of Key Performance Indicators (KPIs) in line with the proposed objectives to measures/activities underpinned by verifiable indicators (e.g. referring to the Sustainable Development Goals, European Commission Gender Equality Strategy 2020-2025⁶⁰, or other relevant policy frameworks);
- Ensure their long-term commitment towards engaging in the cooperation activities set up in the frame of their projects (a letter of intent as part of the proposal).

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Available online: [Gender equality in research and innovation - European Commission \(europa.eu\)](https://ec.europa.eu/euipo/en/gender-equality-in-research-and-innovation)

Destination: Reforming and enhancing the European research and innovation system

The guiding policy framework of the destination “Reforming and enhancing the EU research and innovation system” is the Communication “A New ERA for Research and Innovation”⁶¹, the Council Recommendation on the Pact for Research and Innovation in Europe (Pact for R&I)⁶², and the first European Research Area (ERA) Policy Agenda (2022-2024)⁶³. More information on the policy context of the ERA can be found in the introduction to the WIDERA work programme 2025.

This destination focuses on building R&I capacities at the level of R&I institutions and ecosystems, with all expected outcomes and impacts explicitly addressing the four priority areas of the Pact for R&I and the ERA Policy Agenda and its ‘ERA Actions’, as presented below. It also supports the uptake of shared EU values and principles outlined in the Pact such as evidence-informed policymaking, freedom of scientific research, societal responsibility, gender equality, equal opportunities, diversity and inclusiveness. The [ERA Platform](#) highlights how projects funded under previous work programmes have contributed to the ERA policy priorities. Applicants to the current work programme are invited to propose outputs that can be showcased on the ERA platform, such as tools, resources and visual material, which can help broad stakeholder groups make progress in selected ERA policy areas.

The destination includes one call with 7 call topics and other actions that are designed to contribute to the Pact priorities and the related ‘ERA Actions’.

Priority area I (Deepening a truly functioning internal market for knowledge) is addressed with actions that target policy areas such as reproducibility of scientific results, open access publishing, research assessment reform, research careers and researchers’ mobility, gender equality and inclusiveness, academic freedom, and knowledge valorisation, corresponding to ERA Actions 1-7.

Priority area II (Taking up together the green transition and digital transformation and other challenges with impact on society and increasing society’s participation in the ERA) is addressed with actions that focus on connecting stakeholders, local communities and citizens around R&I policies and solutions, corresponding to ERA Action 14.

Priority area III (Enhancing access to research and innovation excellence across the Union and enhancing interconnections between innovation ecosystems across the Union) is addressed with actions that support capacity-building in research management and recognition and uptake of research management profession, corresponding to ERA Action 17.

⁶¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52020DC0628&from=EN>.

⁶² <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021H2122>.

⁶³ https://commission.europa.eu/system/files/2021-11/ec_rtd_era-policy-agenda-2021.pdf.

Priority area IV (Advancing concerted research and innovation investments and reforms) is addressed with actions that support analysis and evidence on the implementation of the ERA through the ERA monitoring mechanism and that facilitate cooperation between national and European R&I systems, corresponding to ERA Actions 19 and 20.

The destination will be implemented in synergies with the European Higher Education Area and the European Education Area, especially in relation to R&I careers and institutional changes in universities and research organisations. Several call topics and other actions will also contribute to the Council Recommendation on a “European Framework to attract and retain research, innovation and entrepreneurial talent in Europe” (2023)⁶⁴.

The topics under this destination welcome the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related project activities.

In line with the ERA-policy driven approach, the current work programme 2025 completes the contribution of this destination “Reforming and enhancing the European research and innovation system” to the first ERA Policy Agenda (2022-2024). The second ERA Policy Agenda (2025-2027) will be supported by the next work programme 2026-2027.

Expected impacts:

Proposals under this destination should set out a credible pathway to contributing to reforming and enhancing the EU research and innovation system, and more specifically to one or several of the following impacts across the four priority areas of the Pact for R&I:

Priority area I. Deepening a truly functioning internal market for knowledge

- Increased capacity in the EU R&I system to conduct open science and establishing it as the prevailing approach in modern research approaches;
- Sustainable high quality institutional non-profit open access publishing services indexed in research information systems adhering to national research assessment standards;
- More responsible assessment of researchers, research projects and research organisations based on a broader range of research outputs, practices and activities than publications and publishing;
- Improved quality, performance and impact of research, researchers and institutions due to more responsible research assessment systems;

⁶⁴ Council Recommendation of 18 December 2023 on a European framework to attract and retain research, innovation and entrepreneurial talents in Europe, <https://eur-lex.europa.eu/eli/C/2023/1640/oj>.

- Researchers benefit from attractive and sustainable careers, including better working conditions for early-career researchers, resulting from the implementation of the European framework for research careers and the Charter for Researchers⁶⁵;
- Reinforced mobility of researchers across sectors and balanced geographical mobility;
- More people are aware of diverse career opportunities in R&I;
- Strengthened gender equality and inclusiveness in the European Research Area;
- Greater quality of scientific production and stronger translation of R&I results into society and economy.

Priority area II. Taking up together the green transition and digital transformation and other challenges with impact on society, and increasing society's participation in the ERA

- Institutional change in line with the ERA priorities through targeted transformations in higher education, research, and innovation;
- Increased engagement of citizens with research and innovation;
- Increased alignment of research with society's needs, expectations and values.

Priority area III. Enhancing access to research and innovation excellence across the Union and enhancing interconnections between innovation ecosystems across the Union

- Increased inter-sectoral mobility/flow-through of R&I talents between sectors;
- Transformation of universities and their access to excellence and talent, including a better management of mobility of researchers to and from academia;
- Greater recognition and uptake of research management profession.

Priority area IV. Advancing concerted research and innovation investments and reforms

- A comprehensive, robust and quality tested monitoring system on the implementation of the ERA;
- Improved access to and exchange of information on the implementation of the ERA Policy Agenda and contribution to the principles and priorities set out in the Pact for R&I;
- Reformed national R&I policies and systems in line with the ERA;

⁶⁵ Council Recommendation of 18 December 2023 on a European framework to attract and retain research, innovation and entrepreneurial talents in Europe, <https://eur-lex.europa.eu/eli/C/2023/1640/oj>.

- Common priority setting and sustainable joint activities and funding programmes among national and regional R&I programmes.

Contribution to principles set out in the Pact for R&I

- A more robust and interconnected European Science for Policy ecosystem that better supports evidence-informed policymaking across sectors and governance levels.

Proposals are invited against the following topic(s):

HORIZON-WIDERA-2025-06-ERA-01: Rolling out the ERA Policy Agenda results

Call: Enhancing the European R&I system	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.50 and 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 26.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Applications must be submitted by a consortium including participation, as beneficiaries, of at least three independent legal entities:</p> <ul style="list-style-type: none"> • Each established in a different Member State or Associated Country; and • Two of which are established in a Member State.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The financial support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>
<i>Evaluation Procedure</i>	To ensure a balanced portfolio covering different ERA policy areas, as outlined in the expected outcomes and scope, grants will be awarded to proposals not only in order of ranking, but at least also to proposals that are the highest ranked within each ERA area, provided that proposals pass all thresholds.

Expected Outcome: This action aims at increased uptake by broad communities of R&I stakeholders of results developed in different ERA policy areas, including open science, research assessment, research careers, knowledge valorisation, and research management. Applicants are invited to select one of the areas outlined below.

Successful proposals will deliver on one or several impacts outlined in the introduction to the work programme destination “Reforming and enhancing the European research and innovation system”.

Project results are expected to increase uptake of ERA policy results and contribute to the outcomes specifically relevant for the area selected and identified by the applicants in their proposal, as listed below.

Area 1: Strengthen uptake of solutions for the reproducibility of scientific results

- Wider implementation of interventions in research performing organisations to increase the reproducibility of research results;
- Better understanding by researchers, policymakers, research institutions and scientific service providers of the effectiveness of policies, practices and tools for increasing the reproducibility of research results;
- Higher proportion of reproducible results from publicly funded research.

Area 2: Advance reforms to research assessment

- Increased awareness and trust among researchers and research organisations about reforms of research assessment;
- Increased uptake of good practices and recommendations from the Coalition for Advancing Research Assessment (CoARA) and other initiatives by researchers and research organisations;
- Increased knowledge by researchers, research organisations and policymakers about limiting factors and enablers of research assessment reforms.

Area 3: Establish communities of practice to strengthen research careers

- Inventory of good practices and lessons learnt for stakeholders at organisational level on the implementation of the various dimensions of the new European framework for research careers⁶⁶, including the Charter for Researchers;
- Increased number of academic and non-academic organisations implementing the new framework for research careers, resulting in stronger research careers for researchers;

⁶⁶ Council Recommendation of 18 December 2023 on a European framework to attract and retain research, innovation and entrepreneurial talents in Europe, <https://eur-lex.europa.eu/eli/C/2023/1640/oj>.

- Better working conditions and employability for researchers, with a special focus on early-career researchers.

Area 4: Establish a European network of knowledge valorisation intermediaries

- A network of European intermediaries is established, connecting academia, industry, society and policymakers, that provides increased recognition of the various profiles and different roles of knowledge valorisation intermediaries;
- New or improved shared resources and tools for knowledge valorisation intermediaries to support the uptake of the EU Guiding Principles for Knowledge Valorisation and the accompanying codes of practice⁶⁷;
- Enhanced capacities and skills of knowledge valorisation intermediaries to connect industry, academia, society and policymakers.

Area 5: Upgrade services of Knowledge and Technology Transfer professionals in universities and research performing organisations

- Enhanced capacities and skills for knowledge transfer professionals in Knowledge Transfer Offices/Technology Transfer Offices (KTO/TTO) (or similar) in universities and research performing organisations to detect the potential market and societal value of R&I results;
- Upgraded services of KTO/TTOs in universities and research performing organisations made freely available for R&I actors to facilitate multi-stakeholder business development activities, knowledge transfer and valorisation, including societal and policy uptake.
- New curricula and training modules for students and researchers by KTO/TTOs to be offered in universities and research performing organisations across Europe to facilitate greater uptake of R&I results, including for skills development and fostering an entrepreneurial mindset.

Area 6: Strengthen capacities and recognition for research management

- A collaborative network is established that enables research managers and their employers to exchange information and best practices with a view to develop better quality and more consistent research management practices across the ERA;
- Enhanced professional recognition and career progression and mobility for research managers by offering specialised training and mentorship programmes, coupled with robust career development tools and reinforced by communication and outreach activities;

⁶⁷ https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/eu-valorisation-policy/knowledge-valorisation-platform/guiding-principles-knowledge-valorisation-and-implementing-codes-practice_en.

- Increased availability and access to research management training and to good institutional practices on research management for a diverse range of organisations and staff within the ERA, with a focus on providing support to those that lack resources.

Scope: This action contributes toward the implementation of the European Research Area (ERA) with targeted interventions in selected policy areas focused on a broad roll-out of the results developed under the first ERA Policy Agenda (2022-2024)⁶⁸. It addresses areas including open science, research assessment, research careers, knowledge valorisation, and research management.

The EU Member States, Associated Countries, R&I stakeholders, and the Commission work in partnership to implement the ERA. This work is structured by the ERA Policy Agenda that identifies concrete ‘ERA Actions’, which address specific challenges faced by R&I communities in Europe. The first ERA Policy Agenda (2022-2024) has delivered many tools, practices, recommendation, and guidelines to help advance the ERA Actions, resulting from different EU, national, regional or local initiatives and projects. A number of results stem from projects funded under Horizon Europe. In particular, the WIDERA work programme has funded a range of coordination and support activities designed to support the implementation of the ERA Policy Agenda⁶⁹.

This action aims at a broader roll-out of these results to diverse ERA communities, including research performing organisations (RPO), research funding organisations (RFO), universities, researchers and innovators, policymakers, and many other actors in the European R&I ecosystem. Proposals should demonstrate the involvement of actors who have not yet partaken in those Horizon Europe-funded actions that specifically address the ERA Policy Agenda. The action supports a wide variety of activities that make use of existing results to enable progress in the implementation of selected ERA Actions in organisations, broader R&I ecosystems and at national level.

Proposals should select and clearly identify one area being addressed, choosing from those set out under the expected outcomes and scope of this action. Each area is designed to contribute toward the implementation of an ERA Action. Proposals should develop activities outlined for the selected area, as well as additional activities contributing to the expected outcomes for the same area. While focusing on one area, proposals may also consider complementarities and synergies with other areas. For example, proposals that choose Area 3 on research careers may develop links with Area 2 on research assessment or Area 6 on research management.

In all project activities, particular attention should be paid to promoting inclusive gender equality and addressing gender-specific challenges. Projects are expected to coordinate and collaborate with other projects funded under this action during implementation, including by way of annual status seminars where project work plans are presented to ensure complementarities and synergies across the areas.

⁶⁸ https://commission.europa.eu/system/files/2021-11/ec_rtd_era-policy-agenda-2021.pdf.

⁶⁹ See examples of how Horizon Europe supports the ERA policy priorities, <https://european-research-area.ec.europa.eu/era-horizon-europe>.

The funded projects should reach large communities of stakeholders (either a group of individual organisations, networks or alliances of organisations, or surrounding ecosystem actors), ensuring their needs are considered and addressed over the course of the project. Proposals should describe their target group in terms of its scope and size. A wide geographical coverage, inclusivity and broad participation should be ensured. The funded projects should remain open to new stakeholders and interested parties. The funded projects should provide open access to all relevant results, in a timely manner.

Proposals are expected to envisage a duration of up to 3 years without prejudice to a longer duration if duly justified.

Area 1: Strengthen uptake of solutions for the reproducibility of scientific results

This area addresses ERA Action 1 that aims to support open sharing, seamless access, and reliable re-use of research data, centred on the FAIR principles. Practices that increase the reproducibility of scientific results⁷⁰ contribute to higher reuse of these results and to increased efficiency, trustworthiness, and overall quality of research.

The area supports the uptake of state-of-the art tools, practices and methodologies that can increase the reproducibility of research results, drawing on activities and results of any relevant projects, networks and initiatives⁷¹. The project activities should involve actors such as RPOs, RFOs, researchers, scientific publishers, and scientific service and infrastructure providers. At least the following activities should be included:

- Deploy, demonstrate and upscale interventions in real-life environments to increase reproducibility of scientific results, targeting cross-discipline and discipline-specific factors that contribute to lack of reproducibility. Interventions may include the application of policies, engagement in practices, or mainstreaming the utilisation of tools, services and infrastructures that enable reproducibility of research results.
- Monitor and analyse the effects of the implemented interventions on the efficiency of research processes, the trustworthiness of results, the reuse of results in further research and/or innovation, and the overall quality of scientific production. Deployment and demonstrations should be of sufficient duration and scale to assess their effects.
- Support mutual learning, and exchange and dissemination of best practices across organisations in Europe and develop evidence-based recommendations for policymakers and research organisations.

Area 2: Advance reforms to research assessment

This area addresses ERA Action 3 that aims to support reform of research assessment toward recognising the diversity of research practices, activities and outputs, moving away from

⁷⁰ Practices that enable researchers and the scientific community at large to obtain confirming results as the originators of a research finding.

⁷¹ Including projects funded under [HORIZON-WIDERA-2022-ERA-01-41](#) and [HORIZON-WIDERA-2024-ERA-01-09](#).

relying mainly on the quantity of publications or the prestige of their publishing venues, to achieve higher quality and impact of research.

The area supports the uptake of good practices and recommendations that facilitate implementation of research assessment reform, building on activities and results of any relevant projects⁷² and initiatives, especially the Agreement on Reforming Research Assessment⁷³, the [Coalition for Advancing Research Assessment](#) (CoARA), and the [San Francisco Declaration on Research Assessment](#) (DORA). The project activities should involve diverse research organisations like universities, RPOs, RFOs, academies and learned societies, as well as researchers' organisations, researchers and support staff, from diverse disciplines and at various career stages. At least the following activities should be included:

- Identify and discuss barriers and enablers to reform at national level and shared implementation avenues, and maximise the roll-out of reforms through engagement with CoARA Working Groups and National Chapters⁷⁴ and other communities of practice.
- Support the development of change management strategies within organisations to facilitate the implementation of reforms and to build trust towards reformed research assessment systems.
- Develop and coordinate actions to raise awareness about good practices and support the implementation of reforms via workshops, training and associated materials, and/or dedicated conference(s) targeting researchers.

Area 3: Establish communities of practice to strengthen research careers

This area addresses ERA Action 4 that aims to strengthen research careers in all sectors, tackling aspects such as precarity and working conditions, skills, inter-sectoral and inter-disciplinary mobility, career development and progression.

The area supports the wide uptake by organisations of the provisions of the framework established by the Council Recommendation on research careers and the Charter for Researchers⁷⁵, and builds on the results and recommendations from the Mutual Learning Exercise on research careers⁷⁶ and any previous or ongoing relevant initiatives and projects at European or national level contributing to the implementation of the new framework⁷⁷. The project activities should involve universities, RPOs, RFOs, researchers' organisations,

⁷² Including projects funded under [HORIZON-WIDERA-2023-ERA-01-07](#) and [HORIZON-INFRA-2022-EOSC-01-01](#).

⁷³ https://coara.eu/app/uploads/2022/09/2022_07_19_rra_agreement_final.pdf.

⁷⁴ CoARA operates several working groups and national chapters that identify good practices and recommendations.

⁷⁵ Council Recommendation of 18 December 2023 on a European framework to attract and retain research, innovation and entrepreneurial talents in Europe, <https://eur-lex.europa.eu/eli/C/2023/1640/oj>.

⁷⁶ Funded by Horizon Policy Support Facility, <https://projects.research-and-innovation.ec.europa.eu/en/statistics/policy-support-facility/mutual-learning-exercise-research-careers>.

⁷⁷ Including projects funded under [HORIZON-WIDERA-2022-ERA-01-50](#) and [HORIZON-WIDERA-2024-ERA-02-03](#).

governmental organisations, and other employers of researchers in the public and private sector. At least the following activities should be included:

- Establish an intersectoral consortium of at least 15 partners with the objective of creating an inclusive community of practice that supports cooperation and exchange of good practices to implement the new framework to strengthen research careers at European, national, regional and organisational level. The consortium should demonstrate in the proposal how and to what extent it will involve stakeholders outside the consortium in the community of practice, with a view to maximising the impact of activities on strengthening research careers.
- Map challenges, exchange good practices, including by developing relevant platforms, organise mutual learning events, intra- and extra-consortium cooperation with stakeholders, and networking.
- Develop and disseminate recommendations for peers and for policymakers in relation to aspects covered by the new framework to strengthen research careers, on the basis of internal exchanges and practices, as well as significant outcomes from other projects.

Area 4: Establish a European network of knowledge valorisation intermediaries

This area addresses ERA Action 7 that aims to enhance knowledge sharing and valorisation in Europe. Intermediaries⁷⁸ are crucial for valorisation as they help connect researchers with actors who can drive economic and societal value from research results, data and knowledge.

The area supports the uptake of the new Guiding Principles Knowledge Valorisation and Codes of Practice⁷⁹ through upgrading the capacities of intermediaries. By improving their skills and services in line with the new guidelines, intermediaries can effectively increase connections between all R&I actors when it comes to intellectual assets management, standardisation, industry-academia co-creation and citizen engagement. The project activities should involve entities that typically act as intermediaries. At least the following activities should be included:

- Set up a European network of intermediaries to activate intensive and inclusive multi-actor collaboration and networking.
- Develop trainings and a knowledge valorisation toolbox based on the codes of practice, to be made freely available for all R&I actors.

⁷⁸ Intermediaries provide support services in various forms, such as guidance, networking, training and mentoring, to stimulate market and societal uptake. A broad range of institutions can act as intermediaries, e.g., incubators, science parks, European, national and regional innovation hubs or clusters, IP experts, consultants and innovation support professionals, science communication and policy engagement teams, and knowledge for policy and citizen engagement professionals.

⁷⁹ https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/eu-valorisation-policy/knowledge-valorisation-platform/guiding-principles-knowledge-valorisation-and-implementing-codes-practice_en.

- Support mobility and outreach, including cross-border secondments between intermediary organisations, replication of best practices, and novel awareness and outreach activities.

Area 5: Upgrade capacities of knowledge and technology transfer professionals in universities and research performing organisations

This area addresses ERA Action 7 that aims to enhance knowledge sharing and valorisation in the ERA, reaching large communities of stakeholders. Knowledge and technology transfer offices (KTO/TTO) in universities and RPOs require a broader range of skills to deliver fit-for-purpose services for R&I actors to achieve greater uptake of economic and societal value.

The area supports the uptake of the new Guiding Principles and Codes of Practice⁸⁰ through upgrading skills and services provided by KTO/TTOs. The action should involve KTO/TTOs, societal and industrial actors, and policymakers and contribute to closing the gender gap through the design of activities. By improving their skills and services in line with the new guidelines, KTO/TTOs can effectively increase connections between all R&I actors when it comes to intellectual asset management, standardisation, industry-academia co-creation and citizen engagement. At least the following activities should be included:

- Develop and coordinate actions for expanding and strengthening skills and capacities of KTO/TTOs, for example, through trainings, peer learning and workshops.
- Develop new services and adaptation of existing services in line with the Guiding Principles, as well as support new training needs, so that KTO/TTOs can respond to the requirements of researchers and students by designing and delivering high quality curricula for greater knowledge valorisation.
- Engage societal and industrial actors, as well as policy makers to ensure the new and adapted services correspond to the needs of these stakeholders, while developing appropriate links with other parts of the work programme, such as [EU Missions](#) and [EIC Business Acceleration Services](#).

Area 6: Strengthen capacities and recognition for research management

This area addresses ERA Action 17 that aims to enhance capacities and professional recognition of research managers in the ERA and address their challenges, such as a lack of professional accreditation, uneven distribution of expertise, and a constant need for new skills.

The area supports the uptake of good practices, recommendations and results stemming from any relevant projects⁸¹ and initiatives. The action should involve current and aspiring research managers and their employers, human resource departments, career advisors, educational institutions, and policymakers. At least the following activities should be included:

⁸⁰ https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/eu-valorisation-policy/knowledge-valorisation-platform/guiding-principles-knowledge-valorisation-and-implementing-codes-practice_en.

⁸¹ Projects funded under [HORIZON-WIDERA-2021-ERA-01-20](#).

- Create a centralised online hub for networking, collaborative learning and information sharing among research managers and their employers to standardise and enhance research management across the ERA.
- Provide research managers with tailored training programmes and career guidance services, from workshops to online courses, aligned with the development of the careers and competency framework for research managers (RM Comp), enhancing their skill sets and career progression opportunities.
- Execute a strategic communication plan that includes outreach activities, promotional campaigns, support to evidence-based policymaking, and advocacy efforts to raise the profile and recognition of research management as a vital and distinct profession within the R&I ecosystem, including developing and disseminating recommendations for RPOs and policymakers.

HORIZON-WIDERA-2025-06-ERA-02: Enable sustained coordination and guidance at the European level on institutional non-profit open access publishing

Call: Enhancing the European R&I system	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Applications must be submitted by a consortium including participation, as beneficiaries, of at least three independent legal entities:</p> <ul style="list-style-type: none"> • Each established in a different Member State or Associated Country; and • Two of which are established in a Member State.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The financial support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is</p>

	EUR 60 000.
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Expected Outcome: The successful proposal will deliver on the following impacts: “Sustainable high quality institutional non-profit open access publishing services indexed in research information systems adhering to national research assessment standards” and “Increased capacity in the EU R&I system to conduct open science and establishing it as the prevailing approach in modern research approaches”.

Projects are expected to contribute to all of the following outcomes:

- Broader range of services for developing skills and competencies of institutional non-profit publishers, centrally offered at European and national level, providing access to relevant tools and technologies and supporting capacity-building in institutional non-profit publishing;
- Increased alignment of institutional non-profit open access publishing services across Europe to commonly agreed quality standards regarding aspects such as ownership/governance, editorial/publishing policies and practices, research integrity, open science, and technical service efficiency;
- Well-connected and effective European network focused on institutional non-profit open access publishing, with broad recognition across academic disciplines.

Scope: The conclusions on ‘high quality, transparent, open, trustworthy and equitable scholarly publishing’ that the Council of the European Union adopted in May 2023⁸² highlight the importance of equitable scholarly open access publishing models where authors can publish their work irrespective of their institutional affiliation or funding source, with no fees to them or their readers. EU Member States also called for supporting the development of publishing models led by public research organisations. In recent years, universities, research institutions and other organisations relevant to research have increasingly engaged in setting up their own open access publishing activities and services. This trend has been driven by technological advancements and a growing desire for open access, usually on a non-profit basis. As a result, new mission-driven and bottom-up institutional, non-profit open access publishing models have emerged in Europe and beyond. However, such publishing services have largely evolved without clear strategies for coordination, governance, or sustained funding, and without commonly agreed quality standards. Additionally, the research institutions and universities that host open access publishing services, in particular non-profit ones, often do not perceive them as core activities. As a result, researchers who are faced with a rich but fragmented landscape of institutional non-profit open access services often prefer more familiar and trusted publishing venues.

Therefore, it is essential to provide coordinated and ongoing central support to enhance the quality of the services offered by these institutional non-profit publishers. This support should

⁸² Council Conclusions on ‘high quality, transparent, open, trustworthy and equitable scholarly publishing’ 23 May 2023, 9616/23, <https://data.consilium.europa.eu/doc/document/ST-9616-2023-INIT/en/pdf>.

offer services, resources, activities, toolkits and coordination at the European level. It should visibly enhance the quality of services, align with commonly agreed publishing and technical standards, improve staff skills and competences, and foster network-building among institutional non-profit publishers.

The action supports the ERA Policy Agenda Action 1 – Enable Open Science, including through the European Open Science Cloud⁸³.

Proposals should address at least the following:

- Provision of services to institutional non-profit publishing initiatives, including guidance and support for quality assessment, access to tools and technology, and support in meeting technological standards (e.g., interoperability standards). Complementarity between activities at European, national, and institutional level provided by different types of actors must be ensured.
- Organisation of training programmes for all stakeholders in institutional non-profit open access publishing to support the further development of skills and competences, and facilitation of exchanges of electronic publishing specialists across the European Research Area. The activities should aim to achieve support for such publishing services within institutions and help embed them in national research assessment systems.
- Coordination of services and practices with the aim of exploiting synergies and creating efficiencies, including the pooling of resources at European level. Activities should aim to ensure that resources developed are available to all those who are managing institutional non-profit open access publishing in Europe, with attention to equitable access to and distribution of these resources.

The action may build on and valorise the results of earlier projects, in particular projects focused on capacity-building and global cooperation for institutional non-profit open access publishing, as well as of relevant national and European initiatives⁸⁴. The action should address articles, as well as monograph/book publishing.

The duration of this action should not exceed 3 years.

HORIZON-WIDERA-2025-06-ERA-03: Research and innovation to provide evidence that support reforms of research assessment

Call: Enhancing the European R&I system	
Specific conditions	
<i>Expected EU contribution per</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately.

⁸³ https://commission.europa.eu/system/files/2021-11/ec_rtd_era-policy-agenda-2021.pdf.

⁸⁴ Projects funded under [HORIZON-WIDERA-2021-ERA-01-43](#), [HORIZON-WIDERA-2022-ERA-01-42](#), [HORIZON-INFRA-2022-EOSC-01-02](#), and [HORIZON-WIDERA-2024-ERA-01-08](#).

<i>project</i>	Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome: The successful proposal will deliver on the following impacts: “*More responsible assessment of researchers, research projects and research organisations based on a broader range of research outputs, practices and activities than publications and publishing*” and “*Improved quality, performance and impact of research, researchers and institutions due to more responsible research assessment systems*”.

Project results are expected to contribute to all of the following expected outcomes:

- Increased scientific knowledge on assessment tools and methods, their potential biases and limitations, and corresponding solutions;
- Increased scientific knowledge on methods to reform research assessment;
- Evidence supporting the implementation of the commitments of the Agreement on Reforming Research Assessment available to policy makers and research organisations involved in research assessment.

Scope:

A global movement is underway to significantly enhance the evaluation process for researchers, research projects and research institutions. [The San Francisco Declaration on Research Assessment](#) (DORA), [the Leiden Manifesto](#), [the Latin American Forum on Research Assessment](#) (FOLEC-CLACSO), and the Agreement on Reforming Research Assessment⁸⁵ and [the Coalition for Advancing Research Assessment](#) (CoARA) under Action 3 of the European Research Area Policy Agenda 2022-2024⁸⁶ are the main initiatives that strive to shift away from inappropriate reliance on metrics such as the Journal Impact Factor. Instead, they acknowledge the diverse range of research practices, activities and outputs that go beyond publications. They aim to reward practices, activities and outputs that contribute to a higher quality and impact of research, while also recognising and mitigating systemic biases, particularly gender biases, within traditional assessment metrics.

[CoARA Working Groups](#) carry out in-depth work to enable signatories of the Agreement on Reforming Research Assessment to exchange experiences, learn from each other and identify good practices, thus supporting their efforts to reform research assessment.

The identification of good practices and the implementation of changes to research assessment require solid scientific evidence. This concerns evidence about assessment tools and methods, and exploring issues across disciplines and types of research organisations, such

⁸⁵ https://coara.eu/app/uploads/2022/09/2022_07_19_rra_agreement_final.pdf.

⁸⁶ https://commission.europa.eu/system/files/2021-11/ec_rtd_era-policy-agenda-2021.pdf.

as: best practices in qualitative assessment; making peer review practices less bias-prone and more transparent; lessons learned from pilots with narrative CVs; inappropriate uses of metrics and alternatives for different levels of assessment (of research, of researchers and of research institutions); relevant indicators (that are open) for developing new assessment frameworks; infrastructures and tools needed to base research assessment on FAIR research digital objects (e.g., publications, data, software); ensuring that assessment methods promote diversity and inclusion across genders and underrepresented groups. This also concerns evidence about reform methods and about institutional changes and culture, investigating issues, such as: ensuring readiness and engagement of the scientific community and research organisations to changes; including different disciplinary perspectives; piloting actions that can lead to new assessment practices.

The action aims to provide the evidence needed for the practical implementation of research assessment reforms. It will gather and evaluate existing evidence and carry out additional research activities to support the implementation of the commitments of the Agreement on Reforming Research Assessment, in line with the 10 principles for reforms. The action consists of three parts, all of which must be addressed:

- Review existing literature, data and evidence on research assessment practices and evaluate their validity and robustness for implementing the Agreement on Reforming Research Assessment.
- Identify gaps in knowledge and prioritise areas that require further research activities to support reforms of research assessment in line with the Agreement on Reforming Research Assessment.
- Implement research activities in the prioritised areas.

The proposals should ensure synergies and complementarities, develop close cooperation, and share knowledge and evidence with CoARA and its Working Groups, the [CoARA Boost](#) project, DORA, and other relevant initiatives. The proposals should provide open access to all relevant results as early as possible, with specific efforts to ensure that these results are accessible and relevant to diverse and underrepresented groups.

This action may require the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities⁸⁷.

The duration of this action should not exceed 3 years.

⁸⁷ https://research-and-innovation.ec.europa.eu/research-area/social-sciences-and-humanities/ssh-integration_en.

HORIZON-WIDERA-2025-06-ERA-04: Investigating and addressing career barriers faced by underrepresented and marginalised researchers

Call: Enhancing the European R&I system	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome: The successful proposal will deliver on the following impact: *“Strengthened gender equality and inclusiveness in the European Research Area”*.

Project results are expected to contribute to all of the following outcomes:

- Policy makers, research funding organisations, higher education and research performing organisations, researchers and other research and innovation stakeholders are more aware of the barriers faced by researchers from underrepresented groups and marginalised communities and have more knowledge at their disposal;
- Policy makers, research funding organisations, higher education and research performing organisations, researchers and other research and innovation stakeholders are equipped with concrete tools and measures to support fair career advancement of disadvantaged researchers from underrepresented and marginalised groups.

Scope:

Researchers from underrepresented groups and marginalised communities – including, e.g., racialised researchers, researchers with disabilities, LGBTIQ or refugee researchers – encounter structural, material, and cultural inequalities. The challenges and barriers they face include, but are not limited to, more working precarity, higher rates of gender-based violence and harassment, epistemic injustice and lack of recognition, unequal access to resources, mentorship and support networks, and other obstacles stemming from cultural or social stereotypes leading to conscious and unconscious biases. These disparities are furthermore often exacerbated due to the compounded effects of multiple and intersecting discriminations. Despite increasing efforts, there is still limited understanding of how these intersectional inequalities manifest themselves and how they can be and are being addressed at EU and national level and in research performing organisations and funding organisations.

Intersectionality has been put forward as a cross-cutting approach of the Commission's Union of Equality strategies⁸⁸. Gender equality and inclusiveness have been recognised as core values and principles of the European Research Area (ERA)⁸⁹, as reflected in Action 5 of the ERA Policy Agenda 2022-2024⁹⁰, and further reiterated in the new European framework for research careers and the new European Charter for Researchers⁹¹, stressing also the inclusiveness for researchers from all backgrounds including under-represented and marginalised groups.

This action supports the objectives of ERA Action 5, as well as of ERA Action 4 focusing on strengthening inclusive research careers in Europe. Therefore, a close cooperation with relevant ERA stakeholders, including the subgroup of the ERA Forum dedicated to ERA Action 5⁹², is required, as is the involvement of researchers from concerned underrepresented and marginalised groups and the involvement of community support networks.

Conducting research, carried out in dedicated work packages with specific objectives and tasks, should be the core component of the action. The action should also take into account national legal and policy frameworks, institutional practices as well as individual levels, and aim to contribute to promoting the inclusion of researchers from under-represented and marginalised groups in the EU research and innovation system.

Proposals are expected to address all of the following:

- Investigate the specific barriers faced by researchers from at least three underrepresented and marginalised groups at different stages of their careers, starting from the gender perspective and considering other discrimination grounds. This should build on existing research, as well as on other relevant sources⁹³, and be based on quantitative and qualitative data, including personal testimonies that should be gathered by the project in at least 10 Member States and Associated Countries.
- Develop tools (e.g., toolkits, guidance, training and dissemination materials) and deliver evidence-informed recommendations on how to design and implement inclusive, intersectional, and human-centred gender equality plans and shape policies in the ERA at the level of higher education and research performing organisations, research funding organisations, and national and EU research and innovation policy makers. Proposals

⁸⁸ Gender Equality Strategy 2020-2025, EU Anti-Racism Action Plan 2022-2025, the EU Roma strategic framework for equality, inclusion, and participation 2020-2030, LGBTIQ Equality Strategy 2020-2025, Strategy for the Rights of Persons with Disabilities 2021-2030, https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/union-equality_en.

⁸⁹ Council Recommendation on a Pact for Research and Innovation in Europe, <https://data.consilium.europa.eu/doc/document/ST-13701-2021-INIT/en/pdf>.
⁹⁰ https://commission.europa.eu/system/files/2021-11/ec_rtd_era-policy-agenda-2021.pdf.

⁹¹ Council Recommendation of 18 December 2023 on a European framework to attract and retain research, innovation and entrepreneurial talents in Europe, <https://eur-lex.europa.eu/eli/C/2023/1640/oj>.
⁹² <https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&fromMainGroup=true&groupID=103813>.

⁹³ E.g., Equality data collection, https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/combating-discrimination/equality-data-collection_en; The Compendium of Practices on Equality Data, <https://fra.europa.eu/en/promising-practices-list>.

should develop interventions such as mentorship programmes, intersectional diversity training, policy changes, cultural competency initiatives, or structural reforms.

- Disseminate research results and project outcomes and materials to national and EU policy-makers, research funding organisations, higher education and research performing organisations, researchers, and other relevant ERA stakeholders.

Proposals should build on the knowledge and expertise developed through related actions funded under Horizon 2020 and the Horizon Europe WIDERA Work Programme⁹⁴. Proposals are also encouraged to explore potential synergies with projects funded under Horizon Europe Cluster 2⁹⁵ and by the European Research Council⁹⁶, particularly regarding their operationalisation and methodological approach to intersectionality.

The expected duration of this action is 3 years.

HORIZON-WIDERA-2025-06-ERA-05: Programme-level collaboration

Call: Enhancing the European R&I system	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <p>Applications must be submitted by a consortium including participation, as beneficiaries, of at least three independent legal entities:</p> <ul style="list-style-type: none"> • Each established in a different Member State, Associated Country or non-associated third country; and • Two of which are established in a Member State. <p>Due to the scope of this topic, legal entities established in non-associated third countries are exceptionally eligible for Union funding.</p> <p>If eligible for funding, legal entities established in non-associated third</p>

⁹⁴ Projects funded under [SwafS-25-2020](#), [HORIZON-WIDERA-2023-ERA-01-09](#), [HORIZON-WIDERA-2021-ERA-01-80](#), and [HORIZON-WIDERA-2021-ERA-01-81](#).

⁹⁵ Projects funded under [HORIZON-CL2-2023-DEMOCRACY-01-07](#).

⁹⁶ For example, project [INTERMAPS](#), funded under [ERC-2021-STG](#).

	countries may exceptionally participate in this coordination and support action as a beneficiary or affiliated entity.
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Expected Outcome: Successful proposals will deliver on the following impact: “*Common priority setting and sustainable joint activities and funding programmes among national and regional research and innovation programmes*”.

The proposals funded under this topic should coordinate national and regional research and innovation (R&I) funding programmes by pooling national and regional resources and align national and regional research and innovation policies, with the overall aim to enhance collaborative R&I efforts to address global challenges.

Projects are expected to contribute to all of the following expected outcomes:

- Identification of common research and innovation priorities among national and regional R&I programmes, with consideration given to relevant international R&I policy developments and trends, and leading to coordinated R&I funding agendas;
- Implementation of multiannual joint calls, resulting in the funding of transnational collaborative R&I projects;
- Implementation of additional joint activities supporting technology and regulatory policy, and societal and market uptake;
- Contribution to participating states meeting global challenges, including relevant contributions to the Sustainable Development Goals.

Scope: Since the introduction of the European Research Area (ERA) in 2000 and starting with Framework Programme 6 and the introduction of the ERA-NET scheme, programme-level collaboration among EU Member States and Associated Countries and their research and innovation funding programmes has become a cornerstone of the ERA. Hundreds of networks among research funders have been created over time, serving different research needs, but always coordinating public research investments across borders and allowing researchers to apply for calls for transnational research projects funded by the participating states.

Horizon Europe introduces a new approach to incentivise programme level collaboration. Concerted R&I initiatives, which mobilise efforts and resources of public and private actors, are implemented through [EU Missions](#) and the co-funded, co-programmed and institutionalised [European Partnerships](#). The ERA part of Horizon Europe complements this new strategic approach by providing the possibility for Member States, Associated Countries, their legal entities, including regional authorities and agencies and civil society organisations, to maintain existing and establish new collaborations on priorities of their choice, thereby continuing the spirit of the successful ERA-NET scheme, funded under Horizon 2020.

This action supports bottom-up initiatives that allow stakeholders to define new collaborations on chosen priorities, align national and regional research funding, pool resources, and ensure complementarity with the Framework Programme activities, European Partnerships, and EU

Missions, thereby supporting the ERA. The action contributes to the objectives of the Pact for Research and Innovation in Europe⁹⁷ to increase the share of national public research and development expenditure committed to the European Partnerships and EU Missions.

In order to achieve the expected outcomes, international cooperation is encouraged. The action allows to strengthen collaboration with third countries and promote shared European values and principles for research and innovation, including advancing gender equality and inclusiveness. Involvement of non-associated third countries must be clearly explained and justified in the proposal.

Successful proposals should align national and regional research funding programmes on agreed priorities common to the countries participating in the action and, where appropriate, implement joint calls for transnational R&I projects as well as other joint calls or joint activities.

Applicants should demonstrate clear commitments from participating programmes to pool resources. The necessary resources should be pooled from the participating national or regional research programmes as well as, where appropriate, leveraged from pertinent foundations, charities and transnational initiatives, with a view to implementing calls for proposals, either within the context of this action or in possible follow-up actions, resulting in grants to third parties without EU co-funding in this area.

Proposals should also demonstrate potential impact at national, regional and transnational level. Proposals should demonstrate that activities exclude overlaps with on-going actions co-funded by the EU under Horizon 2020 or Horizon Europe.

Proposals are expected to envisage a duration of up to 3 years without prejudice to a longer duration if duly justified by the ambitions and complexity of the proposed activities.

HORIZON-WIDERA-2025-06-ERA-06: Strengthening of the European Science for Policy Ecosystem

Call: Enhancing the European R&I system	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility</i>	The conditions are described in General Annex B. The following

⁹⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021H2122>.

<i>conditions</i>	<p>exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>Applications must be submitted by a consortium including participation, as beneficiaries, of at least three independent legal entities:</p> <ul style="list-style-type: none"> • Each established in a different Member State or Associated Country; and • Two of which are established in a Member State.
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Expected Outcome: The successful proposal will deliver on the following impact: “*A more robust and interconnected European Science for Policy (S4P) ecosystem that better supports evidence-informed policymaking across sectors and governance levels*”.

Project results are expected to contribute to all of the following expected outcomes:

- Increased connectivity of S4P actors and networks that enhances interactions, mutual learning, collaboration, capacity building, and promotion of S4P practices and knowledge, while also strengthening pan-European and international ecosystems.
- S4P approaches are mainstreamed in national R&I policy institutions at all levels of governance through coordinated efforts and mutual learning across Europe.
- The concept of “Science for Policy” is further developed and widely adopted among S4P stakeholders and actors through identification of best practices, guides and frameworks at different levels of governance and across thematic sectors.

Scope: Science for evidence-informed policymaking or Science for Policy (S4P) refers to the use of the best available scientific evidence, knowledge, and expertise to inform policymaking, aiming to achieve better public policies. By integrating science into policymaking, governments and organisations can make better-informed decisions and develop effective strategies that are grounded in a deeper understanding of complex and interconnected issues.

The need for a structured scientific support to policymaking at EU, national and subnational levels is in line with the principle of evidence-based policymaking acknowledged in the Pact for Research and Innovation in Europe⁹⁸ and is underscored in several recent EU policy documents and initiatives⁹⁹. The summary conclusions on the Policy Debate “Towards a European S4P ecosystem” adopted in June 2022 by the European Research Area and Innovation Committee (ERAC)¹⁰⁰ and the Council conclusions on “Strengthening the role and

⁹⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021H2122>.

⁹⁹ COM SWD (2022) 346 final of October 2022, Supporting and connecting policymaking in the Member States with scientific research, https://knowledge4policy.ec.europa.eu/file/staff-working-document-supporting-connecting-policymaking-member-states-scientific-research_en.

¹⁰⁰ ERAC Summary Conclusions of the Policy Debate ‘Towards a European Science for Policy ecosystem’, <https://data.consilium.europa.eu/doc/document/ST-13213-2023-INIT/en/pdf>.

impact of R&I in the policymaking process in the European Union” adopted in December 2023¹⁰¹ specifically call upon the Commission to play a key role in coordinating actions in this domain.

In line with what is outlined in the above-mentioned documents, this action aims to pursue the following objectives:

- Further develop the concept of “Science for Policy” and improve the cross-cutting integration of scientific evidence and knowledge in public policies.
- Advance and strengthen the European S4P ecosystem across sectors and governance levels.
- Promote the collaboration of networks of relevant actors and foster the identification and exchange of best practices and mutual learning.

Accordingly, the main focus of the funded project should be to carry out the following activities:

1. Nurturing and animating a Science for Policy Community of Practice that, working with other relevant existing networks and communities of practice, will identify and bring together interested S4P actors and stakeholders to enable the identification of common concepts, challenges and approaches, the exchange of information, ways of working and good practices; mutual learning and competence sharing and exchanges, and the promotion of S4P across Europe and beyond. The community of practice must engage and involve S4P stakeholders and actors (scientists, academia, intermediaries and knowledge brokers, science advisors, policymakers/political authorities, civil society organisations, etc.) at all levels of governance. The community of practice should also encompass an international dimension¹⁰².

The community of practice must be facilitated by appropriate digital collaboration tools, including an active online presence. It must remain open to new stakeholders and interested parties all along the process. A dedicated governance body should be set up to coordinate closely with the Commission to ensure good policy alignment and communication. Additionally, and in close collaboration with the community of practice, **events, training and peer learning activities** must be organised to strengthen skills and competences, enable the engagement and collaboration of S4P actors and networks, and to amplify the impact and reach of the community of practice.

2. Providing operational support to the Network of Science for Policy Correspondents, to be set up by the Commission in the second quarter of 2025. The network will bring together officials working on S4P in national R&I policy institutions across Europe with the aim to

¹⁰¹ Council conclusions on strengthening the role and impact of research and innovation in the policymaking process in the Union, 16450/23, <https://data.consilium.europa.eu/doc/document/ST-15118-2023-INIT/en/pdf>.

¹⁰² By involving relevant networks, including the European Science Advisors Forum (ESAF), the European Parliamentary Technology Assessment network (EPTA) and the International Network for Government Science Advice (INGSA) amongst others, as well as intergovernmental organisations (e.g., UN, OECD).

coordinate efforts to mainstream S4P approaches in their respective administrations at all levels of governance and foster mutual learning across countries. The support must include **logistical assistance** such as organising key meetings, agenda development, and facilitation of events employing effective participatory and inclusive methods.

3. **Creating an observatory of the European S4P landscape and its practices** with the collaboration of both the network and the community of practice. The exercise should map the institutional landscape by developing or making use of an appropriate taxonomy that builds on relevant existing initiatives, frameworks and Commission activities (see below). In addition, in the first half of the project, a repository of good **S4P practices and use cases** must be established, including a toolkit and an analysis of success factors and common challenges of operating at the science-policy interface, to be kept up to date throughout the project.

4. **Regularly convening the network, the community of practice, and other interested stakeholders** to discuss how to create the necessary conditions to enable effective engagement between research and policy and to support the production and uptake of scientific evidence, knowledge, and expertise in policymaking. This may focus on specific thematic areas to explore how S4P approaches are implemented in specific sectors (e.g., sustainable food systems, energy transition). Such dialogues are encouraged to also take place in alignment with Council presidencies.

5. **Developing publicly available outputs** (policy briefs, factsheets, resources and instruments for practitioners, etc.) in support of the above activities and **promoting and disseminating** the outcomes and results of the action to target groups through the deployment of a comprehensive communication strategy. These materials and tools should be widely disseminated and made available to the network and the community of practice.

Overall, proposals should implement a multi-actor approach and demonstrate a commitment to disciplinary and geographical diversity and gender-sensitive approaches in all activities. It is expected that the applicants have experience in the field of science for policy, as well as in organisation and facilitation of participatory multi-actor processes and events.

To ensure complementarity, proposals should capitalise and build on relevant Commission S4P initiatives, such as the Mutual Learning Exercise ‘*Bridging the Gap between Science and Policy*’¹⁰³ and the work of the Commission’s Joint Research Centre on S4P competencies and skills¹⁰⁴ and institutional capacity building¹⁰⁵, and other relevant initiatives like the Guiding

¹⁰³ Funded by Horizon Policy Support Facility, <https://projects.research-and-innovation.ec.europa.eu/en/statistics/policy-support-facility/psf-challenge/mutual-learning-exercise-bridging-gap-between-science-and-policy>.

¹⁰⁴ https://knowledge4policy.ec.europa.eu/evidence-informed-policy-making/topic/learning-development_en.

¹⁰⁵ See the JRC initiative to build capacity for evidence-informed policymaking in 7 Member States, https://knowledge4policy.ec.europa.eu/evidence-informed-policy-making/topic/reforms-science-policy-7-member-states_en.

Principles for Knowledge Valorisation¹⁰⁶. With its expertise in institutional, individual and community capacity building for S4P, the JRC may support the consortium in delivering the expected outcomes and assure complementarity of the project with public administration reforms conducted in several Member States under the Technical Support Instrument¹⁰⁷.

The duration of this action should not exceed 3 years.

HORIZON-WIDERA-2025-06-ERA-07: Science comes to town 2027

Call: Enhancing the European R&I system	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: The participating city that the proposal designates as host for EUCYS 2027 must provide as part of the proposal the commitment from its respective National EUCYS Organiser to run the 2027 competition as part of the project (EUCYS National Organiser must either participate as a beneficiary or associated partner or provide a commitment letter).</p> <p>Applications must be submitted by a consortium including participation, as beneficiaries, of at least three independent legal entities:</p> <ul style="list-style-type: none"> • Each established in a different Member State or Associated Country; and • Two of which are established in a Member State.
<i>Legal and financial set-up of the Grant</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries must provide financial support to third parties. The</p>

¹⁰⁶ https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/eu-valorisation-policy/knowledge-valorisation-platform/guiding-principles-knowledge-valorisation-and-implementing-codes-practice_en.

¹⁰⁷ See the JRC initiative to build capacity for evidence-informed policymaking in 7 Member States, https://knowledge4policy.ec.europa.eu/evidence-informed-policy-making/topic/reforms-science-policy-7-member-states_en.

<i>Agreements</i>	<p>financial support to third parties can only be provided in the form of prizes.</p> <p>The maximum amount to be awarded to each third party (recipient) is EUR 60 000.</p> <p>Subcontracting is not restricted to a limited part of the action.</p>
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Expected Outcome: One ambition of the European Research Area (ERA) is to increase societal responsibility and trust in science and innovation by engaging stakeholders, local communities and citizens in the design and implementation of R&I policies and by enhancing communication of science to the public. This action provides an opportunity for cities in Member States and Associated Countries to take centre stage in implementing this vision. It invites a small group of cities to design and implement jointly a vibrant and engaging year-long programme of activities under the label “Science comes to town 2027”. It thus allows cities to bring together their citizens and R&I communities to showcase how science improves the wellbeing of people, economy and planet.

The successful proposal will deliver on the following impacts: *“Increased engagement of citizens with research and innovation”, “Increased alignment of research with society’s needs, expectations and values”, and “More people are aware of diverse career opportunities in R&I”.*

Project results are expected to contribute to all of the following expected outcomes:

- Strengthened capacity, networks and involvement of the participating cities in science communication and citizen engagement in science by showcasing the latest R&I developments, their societal impact, and their benefits to citizens and by experimenting with innovative approaches to engage diverse age and social groups in R&I activities and policies at local, regional, and European levels;
- Enhanced discussion and debate on the future of science and R&I policy in Europe, with emphasis on inclusive and participatory approaches, involving all relevant stakeholders (e.g., researchers, research funders, policy-makers, publishers, citizens, civil society organisations, business) within and outside the EU;
- Improved attractiveness of careers in R&I for younger generations (in academia, industry or starting own business) through organising European-wide science competitions, including the European Union Contest for Young Scientists (EUCYS), the European Union Contest for early-career researchers (EU TalentOn), and other initiatives.

Scope: The engagement of citizens, local communities and civil society are at the centre of the European Research Area (ERA), seeking greater societal impact and increased trust in

science, in line with the ERA Policy Agenda (2022-2024) Action 14 – ‘Bring science closer to citizens’¹⁰⁸.

The action supports a small group of cities to co-organise and host a joint 1-year programme “Science comes to town 2027”, with a robust concept and brand, that focuses on connecting citizens and scientists in the participating cities and beyond. Various events and activities should be organised, such as lectures, workshops, exhibitions, competitions or prizes, in the spirit of the European Capital of Culture or the European Green Capital, highlighting the contribution of science to society and the results of R&I projects supported by national/regional/EU funds, including the Horizon Europe programme.

In addition, the programme of activities should include the following two components:

- EUCYS (European Union Contest for Young Scientists) 2027 will be a science competition, awarding prizes and awards, for 14- to 20-year-olds who are first prize winners of national science contests for school science projects. The objective is to highlight student achievements in science and attract young people to careers in innovation, science, research and technology.
- EU TalentOn (European Union Contest for Early Career Researchers) 2027 will be a science competition, awarding prizes and awards, bringing together at least 100 early-career researchers, 21-35 of age, to work on scientific solutions to societal challenges. The objective is to promote entrepreneurship and research careers in academia and industry, and facilitate cross-border and cross-sectoral collaboration.

EUCYS and EU TalentOn will take place in the third quarter of 2027, customarily in September. More information can be found on the contest websites (see also specific organisational aspects in the respective background notes)¹⁰⁹.

Proposals should experiment with novel and engaging formats across the programmed activities. Special emphasis should be placed on exploring and supporting citizen science to promote both science education and multiple forms of public engagement with science.

Applicants are encouraged to establish synergies with the European Researchers’ Night (Europe’s largest science communication and promotion event which brings together over 1.5 million visitors across Europe every year) and with the Researchers at School initiative, funded by Marie Skłodowska-Curie Actions¹¹⁰.

¹⁰⁸ https://commission.europa.eu/system/files/2021-11/ec_rtd_era-policy-agenda-2021.pdf.

¹⁰⁹ https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/eucys_en; https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/eu-talenton_en.

¹¹⁰ <https://marie-skłodowska-curie-actions.ec.europa.eu/actions/msca-citizens>.

Programmed activities should create a link with the preceding¹¹¹ and subsequent edition of “Science comes to town”, fostering cohesion and growth of the concept and brand of the initiative.

The programme should take place in a small group of cities (minimum 3 and maximum 6) located in at least 3 different Member States and/or Associated Countries, with the majority being in Member States. Participating cities do not need to be geographically close. The consortium can comprise different types of legal entities that can represent the host cities and/or join them in designing and implementing the activities. Local partners that provide the link to science, research and innovation should be included.

Applicants should provide commitment letters from the public authorities of each participating city, signed by the highest authorities (mayor or equivalent city governance representative), demonstrating a strong commitment for the activities included in the proposal. The proposal should provide a clear explanation of how the city will contribute to the initiative and outline its specific roles, resources, and support.

The proposal should demonstrate the ability of the consortium to mobilise substantial resources beyond the Union contribution, including monetary or in-kind sponsorships, to support and broaden the programmed activities. Proposers may choose to further increase the impact and added value by incorporating additional events and activities, financed by other resources, by engaging ‘satellite’ cities to reach further communities. The consortium will report on the implementation of the programmed activities and events not covered by the grant, but will not report/declare the related costs to limit the administrative effort.

Proposals should include the overall concept for the programmed activities, including the focus and scope of activities, outreach strategy, and contribution to long-term vision for the cities, specifying clearly:

- a) events (including EUCYS and EU TalentOn) and activities (e.g., overall coordination and communication activities) that will be funded partially or fully by the Union contribution;
- b) activities and events that will be financed by the participating cities, ‘satellite’ cities, sponsorship and other resources (activities not funded by the Union contribution).

Proposals should present a breakdown of all additional resources. Annexes should only be used for commitment letters, not for extra budget related details.

Priority activity for the successful applicants will be to prepare the detailed draft programme of activities. This will be a deliverable, due not later than 3 months before the formal launch of the “Science comes to town 2027”, subject to the approval of the Granting Authority.

The financial support to third parties can only be provided in the form of prizes to the total amount of:

¹¹¹ See “Science comes to town 2026” in WIDERA work programme 2023-2025, https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2023-2024/wp-11-widening-participation-and-strengthening-the-european-research-area_horizon-2023-2024_en.pdf.

EUCYS: €70 000

EU TalentOn: €100 000

The expected duration of the project is between 24 and 30 months.

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OTHER ACTIONS NOT SUBJECT TO CALLS FOR PROPOSALS

GRANTS TO IDENTIFIED BENEFICIARIES

1. Presidency conferences with a European regional dimension - WIRE 2026

Expected Outcome: Organisation of a two-day conference (WIRE) in 2026, under one of the Presidencies of the Council of the EU. WIRE - The Week of Innovative Regions in Europe is the main European policy forum for innovation and regional development. The event will gather actors active in the innovation and education ecosystem with the aim of improving science-based competitiveness.

Expected Impact: By bringing together diverse stakeholders, including education and research organizations, start-ups, clusters, and policy makers, the conference will debate knowledge based regional development and will offer potential solutions of streamlining resources aimed for this. The collaborative discussions are expected to advance regional development and improve the overall effectiveness of innovation across users and society at large.

Scope: The event will focus on innovation and regional development, exploring trends, best practices, and future visions. It will serve as a key European policy forum for stakeholders involved in the research and innovation ecosystem.

This grant will be awarded without a call for proposals according to Article 198(e) of the Financial Regulation and Article 24(3)(b) of the Horizon Europe Regulation.

Legal entities:

Responsible government department or ministry, or a government-owned legal entity of the incumbent Presidency of the Council, or a legal entity designated by the responsible government department.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: Q4 2025

Indicative budget: EUR 0.25 million from the 2025 budget

PUBLIC PROCUREMENT

1. Development of new functionalities and maintenance of the one-stop-shop on tackling R&I foreign interference

The need for a one-stop-shop to tackle R&I foreign interference, both direct and through proxies, stems from several factors. Various sets of guidelines and tools currently exist on this topic, developed by different Member States and EEA countries, university associations, Research and Technology Organisations, and universities. This variety of supporting documents makes it difficult and time-consuming for end-users, such as researchers, universities, and research performing organisations, to navigate through all available resources. This situation may also lead to a duplication of efforts, as not everyone working on this topic is aware of what has already been produced. The lack of a clear overview of existing materials increases the risk of conflicting information.

The one-stop shop is a publicly accessible inventory of available reports, tools, and guidelines presented in a user-friendly manner¹¹². The user will express its needs, and the platform will provide an overview of all the existing guidance known to the platform. Also, it will make it easier for experts working on this topic to identify gaps in information and focus on them, hopefully avoiding duplication of efforts.

The Council Recommendation on Enhancing Research Security, adopted on 23 May 2024, recommends that the Commission develop and maintain a Union one-stop-shop platform on tackling research and innovation foreign interference¹¹³. The platform aims to consolidate all pertinent data, tools, reports, and other resources developed at Union, national, regional, organisational level, or outside the Union, while ensuring that they are presented in a manner that is both user-friendly, accessible and secure. Member States are recommended to proactively contribute to the EU's one-stop-shop platform on tackling R&I foreign interference by sharing tools and resources developed through public funding with the aim to facilitate the cross-border uptake of these tools and resources and deliver them in a user-friendly, and accessible and secure manner.

The purpose of this procurement action is to maintain and further develop the one-stop-shop platform. This includes developing new features and functionalities, creating content, and enhancing the platform's stability, performance, and security. Moreover, as the one-stop-shop will be using an open-source Large Language Model (LLM) to provide dynamic answers to a large variety of questions, the platform should be continuously monitored and modernised following the latest LLM developments, with sufficient focus on regulatory compliance, security, reliability of answers and cost-cutting measures.

¹¹² The platform will be made available by end of 2024.

¹¹³ <https://www.consilium.europa.eu/en/press/press-releases/2024/05/23/council-adopts-a-recommendation-to-enhance-research-security/>.

The procurement action supports the ERA Policy Agenda Action 6 – Deepening the ERA through protecting academic freedom in Europe¹¹⁴.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q3 2025

Indicative budget: EUR 0.50 million from the 2025 budget

2. Implementation of ERA monitoring

The Council Recommendation on a Pact for Research and Innovation in Europe (Pact for R&I)¹¹⁵ has requested the Commission to set up a new ERA Monitoring Mechanism to provide European, national and regional policy-makers, R&I practitioners and all interested public with solid, European Union-wide analytical tools to help monitor and evaluate progress towards the ERA objectives (as set out on in the Pact for R&I) and assess the implementation of the ERA Policy Agenda Actions¹¹⁶. In that sense, the monitoring mechanism shall ensure a proper basis for evidence-informed policy making in the ERA by providing evidence and analysis. In addition, it shall underpin mutual learning and enhanced bilateral and multilateral dialogues between the Commission and the EU Member States. The action supports the ERA Policy Agenda (2022-2024) Action 19 – Establish an efficient and effective ERA monitoring mechanism.

The purpose of this procurement is, first, to support the implementation of the ERA monitoring mechanism, encompassing preparation of an EU-level Report on the state of play of the implementation of the ERA Policy Agenda every 18 months; regular reports on the progress in the implementation of the ERA of each Member State as well as, if appropriate, of countries associated to Horizon Europe; and, an ERA Scoreboard to assess the overall consolidation and collective progress of ERA priorities at EU and national levels.

Second, the procurement supports the development and maintenance of the [ERA Policy Platform](#) that has as its aim a consistent, robust and quality tested national reporting system. The Pact for R&I defines that the platform should inform on (i) the implementation of the ERA Policy Agenda at Union and national level; and on (ii) other relevant investments, reforms and activities supporting the principles and ERA priority areas set out in the Pact for R&I. The Commission, the Member States, and countries associated to Horizon Europe should share information through the online ERA Policy Platform on their current and planned policies and programmes that contribute to implementing the ERA Policy Agenda, and more broadly contribute to the principles and priorities set out by the Pact for R&I. In that sense, the online platform could serve as a “hub” for sharing information around the new ERA and ease exchange between all actors. Moreover, the Platform provides for easy access

¹¹⁴ https://commission.europa.eu/system/files/2021-11/ec_rtd_era-policy-agenda-2021.pdf.

¹¹⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021H2122>.

¹¹⁶ https://commission.europa.eu/system/files/2021-11/ec_rtd_era-policy-agenda-2021.pdf.

to and information on the priorities areas of the Pact for R&I, the ERA Policy Agenda, including its list of joint actions and their state of implementation, and on Member States and on countries associated to Horizon Europe.

The IT- and communication-related tasks will be implemented through several specific procurement contracts under a framework contract and will cover mainly the further development and maintenance the ERA Policy Platform (including improving the user experience, enhancing the visual appearance of the Platform, adding and efficiently arranging new content, and ensuring the Platform's security and data protection standards).

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q2-Q4 2025

Indicative budget: EUR 1.25 million from the 2025 budget

3. Administrative management of the Human Resources Strategy for Researchers (HRS4R)

The Human Resources Strategy for Researchers (HRS4R)¹¹⁷ is the implementation mechanism of the European Charter for Researchers¹¹⁸, and is key to the career development of researchers as well as to generating, transferring, sharing and disseminating knowledge about Human Resources best practices. HRS4R supports the ERA Policy Agenda (2022-2024) Action 4 by contributing to the development of an attractive, open, and sustainable European labour market for researchers, enhancing the commitment of research organisations' leadership towards human resources as well as improving the researcher-employer relationship.

The HRS4R is a structured and monitored auditing mechanism centred on a continuous assessment in three-year cycles for recognising with the "HR Excellence in Research Award" the institutions that make progress in aligning their human resources policies to the 40 principles of the Charter for Researchers, based on a customised action plan/HR strategy.

To date, over 740 institutions from 39 EU and associated countries have obtained the award and every year several new institutions enter the process.

The contractor will be responsible, in collaboration with the Commission, the applicant institutions and the assessors, for organising the administrative management of the HR Excellence in Research process and for the applications' continuous assessment, including the organisation of desk-based assessments and site visits, the selection of assessors, the administrative validation of assessors' reports and institutions' submissions, as well as

¹¹⁷ HR Excellence in Research Award, <https://euraxess.ec.europa.eu/jobs/hrs4r>.

¹¹⁸ Charter for Researchers, annexed to the Council Recommendation of 18 December 2023 on a European framework to attract and retain research, innovation and entrepreneurial talents in Europe, <https://eur-lex.europa.eu/eli/C/2023/1640/oj>.

managing the communication with applicants, promoting the award and providing feedback to the Commission for policy purposes.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q2 2025

Indicative budget: EUR 1.50 million from the 2025 budget

4. Implementation of the Horizon Policy Support Facility - Framework contract 2025-2029

In order to make research and innovation deliver on their full potential to be the key drivers of economic growth and of the transition towards a sustainable society, ambitious policy reforms of national R&I systems are necessary. Through the Policy Support Facility (PSF), the Commission assists Member States and countries associated to Horizon Europe in developing and implementing those reforms. It offers, on a voluntary basis, high-level expertise and tailor-made advice to national public authorities. The PSF has demonstrated that it serves as an enabler for concrete policy changes.

A new framework service contract will be concluded for a duration of 4 years, covering the operation of the PSF from 2025 to 2029 with an estimated budget ceiling of EUR 10 million over the whole duration of the framework contract.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q2 2025

Budget¹¹⁹

	Budget line(s)	2025 Budget (EUR million)
Calls		
HORIZON-WIDERA-2025-01		80.00
	<i>from</i> 01.020401	80.00
HORIZON-WIDERA-2025-02		20.00
	<i>from</i> 01.020401	20.00
HORIZON-WIDERA-2025-03		40.00
	<i>from</i> 01.020401	40.00
HORIZON-WIDERA-2025-04		3.00
	<i>from</i> 01.020401	3.00
HORIZON-WIDERA-2025-05		24.00
	<i>from</i> 01.020401	24.00
HORIZON-WIDERA-2025-06		44.00
	<i>from</i> 01.020402	44.00
Other actions		
Grant awarded without a call for proposals according to Financial Regulation Article 198(e)		0.25
	<i>from</i> 01.020401	0.25
Public procurement		3.25

¹¹⁹ The budget figures given in this table are rounded to two decimal places.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

Horizon Europe - Work Programme 2025
Widening participation and strengthening the European Research Area

	<i>from</i> <i>01.020402</i>	<i>3.25</i>
Estimated total budget		214.50

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Annex XI

Horizon Europe **Work Programme 2025**

12. Missions

IMPORTANT NOTICE:

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

This draft is made public before the adoption of the work programme to provide potential participants with the currently expected main lines of this work programme. Only the adopted work programme will have legal value.

The adoption of the work programme will be announced on the Horizon Europe website and on the Funding and Tenders Portal.

Information and topic descriptions indicated in this draft may not appear in the final work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

The Commission expressly disclaims liability for any future changes of the content of this document.

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Introduction

The mission-driven approach is a new trend in R&I policy making and was one of the key novelties brought by Horizon Europe Regulation¹ to address global challenges facing our society.

Horizon Europe identified five Mission Areas where challenges could be effectively addressed in a mission-based approach. The following five EU Missions were formally launched through a Commission Communication in September 2021², based on reports from dedicated Mission Boards that assessed the maturity of technological and social innovation in these areas:

- Adaptation to Climate Change: support at least 150 European regions, local authorities and communities to become climate resilient by 2030;
- Cancer: improving the lives of more than 3 million people by 2030 through prevention, cure and for those affected by cancer including their families, to live longer and better;
- 100 Climate-Neutral and Smart cities by 2030;
- Restore our Ocean and Waters by 2030;
- A Soil Deal for Europe: 100 living labs and lighthouses to lead the transition towards healthy soils by 2030.

For each EU Mission, detailed Mission Implementation Plans were drafted, using the Mission criteria of the Horizon Europe legal base as starting point.

The five EU Missions focus on systemic societal transformation, requiring inclusivity, co-design, scaling up, deployment and societal involvement in generating solutions for major societal challenges driven by EU policy considerations. The five EU Missions work by setting clear, measurable, and time-bound targets, thus focusing and integrating actions towards common goals. These actions are clearly presented in the HE Work Programmes 2021-2022 and 2023-2024.

Building on the previous HE Work Programmes, the EU Missions continue to help deliver key EU policy priorities such as the European Green Deal, Europe's Beating Cancer Plan, NextGenerationEU, the EU Industrial Strategy and A Europe fit for the Digital Age, amongst others.

The Missions Work Programme 2025 part contains actions for all the five EU Missions as well as further actions to support the full implementation of EU Missions according to their implementation plans, including synergistic actions between the Missions and other Horizon Europe instruments. The work programme includes activities for the Mission Boards,

¹ Regulation (EU) 2021/695

² COM(2021) 609 final

monitoring, portfolio and an OECD action for evidence-based policy making. Furthermore, the EU Missions Work Programme 2025 is also focusing on the challenges highlighted in the 2023 Commission Communication³ and includes notably public awareness and governance actions as well as actions, which help to leverage other sources of funding.

Furthermore, the five EU Missions will need to be implemented in close synergy with funding, programmes and strategies both at Member State / Associated Country and regional level, as well as with civil society and the private sector.

Please note that legal entities established in China are not eligible to participate in Innovation Actions in any capacity. More details are found in the Annex B of the General Annexes of this Work Programme.

³ COM(2023) 457 final

Calls for proposals

Call - Supporting the implementation of the Adaptation to Climate Change Mission

HORIZON-MISS-2025-01

Overview of this call⁴

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁵	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025 Deadline(s): 24 Sep 2025				
Adaptation to Climate Change: Supporting the implementation of the EU Mission Adaptation to Climate Change				
HORIZON-MISS-2025-01-CLIMA-01: Supporting regions and local authorities in assessing climate risks	RIA	17.65	Around 17.65	1
HORIZON-MISS-2025-01-CLIMA-02: Supporting regional and local authorities in developing their Action Plans towards climate resilience	RIA	25.00	Around 25.00	1
HORIZON-MISS-2025-01-CLIMA-03: Demonstrating solutions to help hotspots in coastal regions to adapt to climate change	IA	30.00	Around 10.00	3
HORIZON-MISS-2025-01-CLIMA-04: Testing and demonstrating innovative solutions	IA	30.00	Around 10.00	3

⁴ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁵ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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to improve resilience to extreme heat, including addressing health impacts				
HORIZON-MISS-2025-01-CLIMA-05: Better understanding incentives for private sector financing of adaptation solutions	RIA	6.00	Around 3.00	2
HORIZON-MISS-2025-01-CLIMA-06: Pre-commercial procurement of breakthrough solutions for climate proofing of public buildings	PCP	5.00	Around 5.00	1
Overall indicative budget		113.65		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Supporting the implementation of the Cancer Mission

HORIZON-MISS-2025-02

Overview of this call⁶

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁷	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025 Deadline(s): 16 Sep 2025				
Cancer: Supporting the implementation of the Cancer Mission				
HORIZON-MISS-2025-02-CANCER-01: Sustained collaboration of national and regional cancer funders to support the Cancer Mission through translational research	CSA	5.00	Around 5.00	1
HORIZON-MISS-2025-02-CANCER-02: Understanding the effects of environmental exposure on the risk of paediatric, adolescent and young adult cancers	RIA	30.45	6.00 to 7.00	5
HORIZON-MISS-2025-02-CANCER-03: Innovative surgery as the cornerstone of affordable multi-modal therapeutic interventions benefitting cancer patients with locally advanced or metastatic disease	RIA	31.00	7.00 to 10.00	4
HORIZON-MISS-2025-02-CANCER-04: Investigator-initiated multinational early-stage innovative clinical trials for paediatric cancer	RIA	25.00	6.00 to 8.00	4
HORIZON-MISS-2025-02-CANCER-05: Pragmatic clinical trials to enhance the quality of life of older cancer patients (65 years and	RIA	15.00	3.00 to 5.00	4

⁶ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁷ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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Missions

older) through nutrition				
HORIZON-MISS-2025-02-CANCER-06: Support to the network of National Cancer Mission Hubs (NCMHs)	CSA	11.00	Around 11.00	1
Overall indicative budget		117.45		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Supporting the implementation of the Restore our Ocean and Waters Mission

HORIZON-MISS-2025-03

Overview of this call⁸

Proposals are invited against the following Destinations and topic(s):

Topics	Type of	Budgets (EUR	Expected EU	Indicative number
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⁸ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

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	Action	million)	contribution per project (EUR million) ⁹	of projects expected to be funded
		2025		
Opening: 07 May 2025				
Deadline(s): 24 Sep 2025				
Supporting the implementation of the Restore our Ocean and Waters Mission				
HORIZON-MISS-2025-03-OCEAN-01: Blue Parks - Towards a coherent European network of strictly protected areas for restoring healthy and productive marine ecosystems	RIA	5.00	4.00 to 5.00	1
HORIZON-MISS-2025-03-OCEAN-02: A toolbox for public authorities to address marine plastics and litter from river-to-ocean	IA	22.00	4.50 to 5.50	4
HORIZON-MISS-2025-03-OCEAN-03: Digital technologies and energy transition in fisheries and/or aquaculture	IA	23.30	5.00 to 5.825	4
HORIZON-MISS-2025-03-OCEAN-04: Restoring Ocean and Waters in Regions	IA	15.00	Around 15.00	1
HORIZON-MISS-2025-03-OCEAN-05: Restoring Ocean and Waters in waterfront Cities and their Ports	IA	15.00	Around 15.00	1
HORIZON-MISS-2025-03-OCEAN-06: Restoring Ocean and Waters on Islands	IA	13.50	Around 13.50	1
HORIZON-MISS-2025-03-OCEAN-07: Mission Lighthouses coordination and support activities	CSA	14.20	3.00 to 3.55	4
HORIZON-MISS-2025-03-OCEAN-08: EU Digital Twin Ocean: Contribution to the EU DTO core infrastructure through applications for sustainable ocean management	IA	12.00	Around 6.00	2
Overall indicative budget		120.00		

⁹ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Supporting the implementation of the Climate-Neutral and Smart Cities Mission

HORIZON-MISS-2025-04

Overview of this call¹⁰

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹¹	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025				

¹⁰ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹¹ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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Deadline(s): 04 Sep 2025				
100 Climate-Neutral and Smart Cities by 2030				
HORIZON-MISS-2025-04-CIT-01: Coupling circularity and climate mitigation in industrial sites and their cities and regions	IA	17.00	Around 8.50	2
HORIZON-MISS-2025-04-CIT-02: Innovative, AI-based solutions for urban planning and management	IA	24.00	Around 6.00	4
Overall indicative budget		41.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Supporting the implementation of the Climate-Neutral and Smart Cities Mission

HORIZON-MISS-2026-04-PCP

Overview of this call¹²

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹³	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025 Deadline(s): 20 Jan 2026				
100 Climate-Neutral and Smart Cities by 2030				
HORIZON-MISS-2026-04-PCP-CIT-01: Boosting the transformation towards climate-neutral cities, the net-zero economy and open strategic autonomy through Pre-Commercial Procurement (PCP)	PCP	37.00	7.00 to 12.00	4
Overall indicative budget		37.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General

¹² The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹³ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

	Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Supporting the implementation of the Soil Deal for Europe Mission

HORIZON-MISS-2025-05

Overview of this call¹⁴

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁵	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025 Deadline(s): 30 Sep 2025				
A Soil Deal for Europe: Research and Innovation and other actions to support the implementation of Mission 'A Soil Deal for Europe'				
HORIZON-MISS-2025-05-SOIL-01: Living Labs for soil remediation and green redevelopment of brownfields	RIA	12.00	Around 12.00	1
HORIZON-MISS-2025-05-SOIL-02: Social, economic and cultural drivers, and costs of land degradation	RIA	11.00	Around 5.50	2
HORIZON-MISS-2025-05-SOIL-03:	RIA	6.00	Around	1

¹⁴ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹⁵ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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Increasing environmental resilience through a better knowledge and management of the soil-water nexus			6.00	
HORIZON-MISS-2025-05-SOIL-04: Developing transfer functions for the Soil Monitoring Law	RIA	6.00	Around 6.00	1
HORIZON-MISS-2025-05-SOIL-05: EU global footprint on soils	RIA	6.00	Around 6.00	1
HORIZON-MISS-2025-05-SOIL-06: Quantifying the impact of farming practices on soil health in arable lands	RIA	6.00	Around 6.00	1
HORIZON-MISS-2025-05-SOIL-07: Improved land suitability for soil health and sustainable biomass production	RIA	6.00	Around 6.00	1
HORIZON-MISS-2025-05-SOIL-08: Support to the operation and further development of soil-health science-policy interfaces and national soil-health hubs	CSA	6.00	Around 6.00	1
HORIZON-MISS-2025-05-SOIL-09: Citizen engagement for sustainable land management through local and regional authorities	CSA	5.00	Around 5.00	1
HORIZON-MISS-2025-05-SOIL-10: Network on carbon farming and emissions reductions for agricultural and forest lands	CSA	3.00	Around 3.00	1
HORIZON-MISS-2025-05-SOIL-11: Soil Salinity in Europe: Drivers, indicators, current levels and temporal changes	RIA	6.00	Around 6.00	1
Overall indicative budget		73.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and</i>	The criteria are described in General Annex

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<i>exclusion</i>	C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Supporting the implementation of the Soil Deal for Europe Mission

HORIZON-MISS-2025-05-two-stage

Overview of this call¹⁶

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁷	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025				
Deadline(s): 04 Sep 2025 (First Stage), 18 Feb 2026 (Second Stage)				
A Soil Deal for Europe: Research and Innovation and other actions to support the implementation of Mission 'A Soil Deal for Europe'				
HORIZON-MISS-2025-05-SOIL-01-two-stage: Living labs to enhance soil health in Continental, Boreal and Alpine	RIA	36.00	Around 12.00	3

¹⁶ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹⁷ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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biogeographical regions				
HORIZON-MISS-2025-05-SOIL-02-two-stage: Broadening the living labs approach for soil health in Africa and Latin America and the Caribbean (LAC)	RIA	12.00	Around 6.00	2
Overall indicative budget		48.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - Joint Call between the Climate-Neutral and Smart Cities Mission and the Cancer Mission

HORIZON-MISS-2025-06

Overview of this call¹⁸

Proposals are invited against the following Destinations and topic(s):

¹⁸ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

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Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁹	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025 Deadline(s): 04 Sep 2025				
EU Missions' Joint Calls				
HORIZON-MISS-2025-06-CIT-CANCER-01: Increasing walking and cycling: to reap health benefits, emission reductions and integrate active mobility and micro-mobility devices, with smart technologies and infrastructure	IA	12.00	Around 6.00	2
Overall indicative budget		12.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

¹⁹ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Call - Cross-cutting activities

HORIZON-MISS-2026-01

Overview of this call²⁰

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ²¹	Indicative number of projects expected to be funded
		2025		
Opening: 09 Dec 2025 Deadline(s): 31 Mar 2026				
EU Missions' Cross-cutting activities				
HORIZON-MISS-2026-07-CROSS-01: Strengthening skills and capacity for the deployment of EU Missions	CSA	1.00	Around 1.00	1
HORIZON-MISS-2026-07-CROSS-02: Understanding and overcoming barriers to the scale-up of innovations supporting EU Missions	RIA	2.00	Around 2.00	1
HORIZON-MISS-2026-07-CROSS-03: Advancing lead markets and proof-of-concept for deep tech solutions contributing to EU Missions	IA	8.00	Around 4.00	2
Overall indicative budget		11.00		

General conditions relating to this call

²⁰ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

²¹ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

EU Missions

Adaptation to Climate Change: Supporting the implementation of the EU Mission Adaptation to Climate Change

Political context

In February 2021, the European Commission adopted an [EU Strategy on Adaptation to Climate Change](#) that sets out how the EU can adapt to the unavoidable impacts of climate change and become climate resilient by 2050. Pushing further on the belief that we must adjust now to tomorrow's climate, the EU has launched, in the same year, the [EU Mission on Adaptation to Climate Change](#) to support at least 150 regions and local authorities to become climate-resilient by 2030.

Since the start of the Mission, the European Commission confirmed its strategic importance and the strength of its approach to accelerate the transformation to a climate-resilient Europe²². It has also acknowledged that the Mission can serve as a best practice for all interested parties, and that it will be further leveraged²³.

In March 2024, the [European Climate Risk Assessment \(EUCRA\)](#), published by the European Environment Agency, has further stressed the need to ramp up adaptation efforts in Europe. The importance of stepping up preparedness and adaptation is also well reflected in the Political Guidelines for the next European Commission²⁴ which call the European Commission to develop a European Climate Adaptation Plan in the coming years.

In this context, the Mission appears to be the perfect vehicle to support climate adaptation at the regional and local levels and to develop and facilitate the take-up of ready-to-use knowledge and tools for climate action.

A regional approach

Regional and local authorities are the end-users of the Mission. By signing the Mission Charter, more than [300 regional and local authorities](#) have committed to working together to transition faster to a climate resilient Europe.

Some regional and local authorities in Europe are well prepared to climate change, others are striving for solutions to address their climate risks. The Mission aims to support as a priority less developed regional and local authorities that are more vulnerable to climate impacts and have low adaptive capacity. The Mission fosters, by the mean of the [Mission Implementation Platform](#) and its [Community of Practice](#), the sharing of experiences and lessons learnt from others, accompanying regions and local authorities in finding and possibly reapplying solutions adapted to their climatic situation and socio-economic context.

²² see Commission [Communication on the EU Missions](#), adopted in July 2023

²³ see [Commission Communication on Managing Climate Risks – protecting people and prosperity, adopted in March 2024](#)

²⁴ See [POLITICAL GUIDELINES FOR THE NEXT EUROPEAN COMMISSION](#) 2024-2029

In line with Horizon Europe, all the actions supported by this call are open to actors from EU Member States and Horizon Europe Associated Countries. However, regional and local authorities already engaged in the Mission activities (e.g. Charter Signatories, Community of Practice) have already proven their commitment and motivation to work towards the objectives of the mission and, as such, they provide ideal sites where the testing and demonstration of innovative approaches could take place.

Research and innovation

Rooted in research and innovation, the Mission aims to align towards its concrete objectives all relevant actors and stakeholders to deliver tangible solutions and concrete impacts by 2030.

The R&I support is provided in different ways:

1. Further support European regional and local authorities to better understand, prepare for and manage climate risks and opportunities, especially in view the large need demonstrated in the early phase of the Mission;
2. Step up support towards at least 150 regional and local authorities to accelerate their transformation to a climate resilient future, supporting them in the co-creation of innovation pathways and the testing of solutions;
3. Demonstrate systemic transformations to climate resilience contributing to deliver at least 75 large-scale demonstrations of systemic transformations to climate resilience across European regional and local authorities.

To be successful, the Mission needs to mobilise all relevant actors -- research institutes, industry, investors and citizens -- to create real and lasting impact and to accelerate their transformation to become climate resilient. In the spirit of the Mission, all proposals should also adopt a participatory approach that fully considers the local dimension of climate change and entails collaboration and engagement with the local communities that are affected by climate impacts. Therefore, engagement of citizens should be embedded in the design and/or implementation of the Mission's solutions.

Strategic direction for 2025

As laid out in its implementation plan, the Mission has moved from its initial build-up phase, where it put in motion all its different streams of actions and is now in full deployment.

The goal of the 2025 call is to consolidate the building blocks of the mission, address challenges identified²⁵ and increase concrete support to regions and local authorities, to match the oversubscription to the Mission by the Charter signatories and interested parties.

The actions presented in this call are going to:

²⁵ Some of those challenges have been identified the [evaluation of the mission conducted in 2023](#) and are referred to in the [Communication on Missions in July 2023](#)

- Provide support to regional and local authorities for them to understand better their current and future climate risks and to design more robust adaptation plans.
- Test and demonstrate innovative climate adaptation solutions that will be made available for regional and local authorities, especially for those in hotspots regions. This will enlarge the portfolio of solutions already made available by the previous Mission's calls.
- Develop new knowledge on how to unlock investment from the private sector in adaptation solutions.

Finally, in 2025, the Adaptation Mission is also co-financing the [Climate City Capital Hub](#), which is listed under “Specific Grant Agreement to the FPA to reinforce the operations of the Climate-Neutral and Smart Cities Mission Platform” in the Work Programme Part of the Cities Mission. This action will reinforce synergies between the Adaptation and Cities Missions supporting cities in finding financing solutions for both mitigation as well as adaptation projects.

Proposals are invited against the following topic(s):

HORIZON-MISS-2025-01-CLIMA-01: Supporting regions and local authorities in assessing climate risks

Call: Supporting the implementation of the Adaptation to Climate Change Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 17.65 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 17.65 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 70 pages.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries must provide financial support to third parties. The

	<p>support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 200,000²⁶, to allow regional and local authorities to conduct a comprehensive climate risk assessment.</p> <p>Eligible third parties are regional and local authorities in EU Member States and Horizon Europe Associated Countries (and/or other entities acting on their behalf), provided that they did not receive financial support under the CLIMAAX²⁷ project nor the concerned territories were already covered by CLIMAAX.</p>
<i>Other requirement</i>	The multi-risk and multi-sector assessment framework used to conduct the climate risk assessments must be open source.

Expected Outcome: In support of the European Green Deal, the EU Adaptation Strategy, the EU Mission on Adaptation to Climate Change and the [EU Disaster Resilience Goals](#), the successful proposal will accelerate adaptation efforts of regional and local authorities. The project is expected to contribute to **all of** the following outcomes:

- The [regional multi-risk assessment framework](#) and the [supporting toolbox](#) already developed in the context of the Mission are further improved and their use is mainstreamed. As a result, scientific knowledge on climate risk assessments at the regional and local levels is strengthened.
- Regions and local authorities have conducted a comprehensive climate risk assessment and are therefore better equipped to reduce their vulnerability and exposure to climate change and to improve their climate resilience.
- Closer links between climate adaptation and disaster risk management policy actors, communities, scientists and civil society are established.
- Current and future climate risks are communicated more clearly to non-specialist audiences, boosting the buy-in and support for a wide range of actions for climate resilience at the regional and local levels and fighting climate disinformation.

Scope: The first [European Climate Risk Assessment](#) (EUCRA) concluded that Europe is not prepared for rapidly growing climate risks. Assessing climate risks is one the first steps that regional and local authorities need to undertake in the adaptation planning²⁸. This step is key

²⁶ Due to the complex nature of climate impacts, EUR 60,000 - the usual amount maximum amount that can be paid to a third party - is an insufficient amount for a regional or local authority to conduct a comprehensive climate risk assessment. Instead, and based on previous experience and review of the market for this type of study, it is considered that EUR 200,000 is more appropriate to cover various costs such as, data collection and analysis, expert and labor cost and stakeholder engagement and communication. This is especially true for bigger regions.

²⁷ This information is or will be publicly available on the website of CLIMAAX. For instance, here are the beneficiaries of the first call: <https://www.climaax.eu/first-regions-started-climate-risk-assessment/>

²⁸ See step 2 ‘Step 2 Assessing climate risks and vulnerabilities’ of the [regional adaptation support tool](#)

to provide robust adaptation plans that respond to the needs of the regional and local authorities.

From the [survey](#) conducted by the Mission with its Charter signatories, it emerged clearly that only 66% of the regional and local authorities had already assessed their climate risks and, in some cases, their climate risk assessments require update and further work to increase their robustness. Using these results as proxy for all regional and local authorities, there is an evident need for more robust regional and local climate risk assessments in Europe.

With its call HORIZON-MISS-2021-CLIMA-02-01, the Mission on Adaptation to Climate Change mandated the development of a methodological framework and toolbox for climate risk assessments at the regional and local levels and to provide direct support to regional and local authorities to use those tools. This topic aims to build upon the achievements of the project [CLIMAAX](#), funded HORIZON-MISS-2021-CLIMA-02-01 :

1) by consolidating and further mainstreaming its regional climate risk assessment [framework](#) and supporting [toolbox](#) (1st objective thereafter)

2) by supporting additional regional and local authorities (not supported by CLIMAAX) to conduct regional climate risk assessments and to develop or revise community-based emergency and risk management plans (2nd objective thereafter).

Both objectives detailed below should be addressed by the proposals. By doing so, this topic directly contributes to the follow-up of the [Commission Communication on managing climate risks](#), where, in its response to EUCRA, the European Commission committed to improving tools that support regions and local authorities better prepare for climate risks.

1st objective- Consolidating and further mainstreaming the framework and toolbox for climate risk assessments.

Further developments of the framework and toolbox for regional climate risk assessment should keep their initial requirements, namely:

- The improved toolbox and framework should be for multi-risk and multi-sector and include exposure and vulnerability.
- The improved toolbox should be broadly applicable in EU Member States (including Outermost Regions) and Associated Countries of Horizon Europe.
- The improved toolbox and related IT tools should be made open source, free and open licensed.

Further refinements of the methodological framework and supporting toolbox should aim to address emerging knowledge and data gaps and could reflect but are not limited to the following elements:

- Incorporating tailored ‘responses’ as a key part of the risk framework, as introduced in the [sixth assessment report](#) of the Intergovernmental Panel on Climate Change;

- Considering, cascading and compounding risks and/or risks from other crises such as biodiversity loss and pollution;
- Accounting for the dynamic nature of climate risk that changes with time;
- Exploring how to translate future scenarios, designed at the global scale, into local risks;
- Incorporating supporting tools for regional climate risk management planning to effectively use the results of the climate risk assessments as basis for community-based emergency and risk management plans.
- Exploring ways to integrate the developments for multi-risk by previous and ongoing Horizon 2020 and Horizon Europe projects²⁹

Those refinements to the framework and supporting toolbox should be co-designed and co-produced with regional/local authorities and practitioners from several EU Member States/Associated Countries, to ensure that their needs and constraints are addressed in a practical way. The improved framework and associated toolbox should benefit from a built-in mechanism for continuous feedback and iterative improvements, ensuring that the tools and assessments remain relevant as climate science and policy evolve.

The consolidated version of the toolbox should strive to include newly produced datasets, in particular those coming from other EU programmes and initiatives such as Copernicus and Destination Earth or from EURO-CORDEX. Exploiting digital technologies such as artificial intelligence (AI) in the tool to better quantify and assess climate risks is encouraged. Proposals are also encouraged to consider -- where relevant -- the services offered by European research infrastructures³⁰ as well as related projects such as [IRISCC](#).

An effective, timely and targeted communication of climate risks is key to drive climate action. The proposals should dedicate efforts to make the improved toolbox and its results more accessible and understandable by non-experts and to combat climate disinformation. This toolbox should include a simple Graphical User Interface to facilitate the dissemination of risk information across the European Union and Associated countries. These efforts to increase accessibility should occur in parallel to the developments of the toolbox for more advanced/expert users.

2nd objective- Using the improved framework and toolbox to support regional and local authorities in assessing their climate risks, as a basis for development or revision of local adaptation, risk management, disaster prevention plans (cascade funding).

The proposals must provide financial support to third parties in the form of grants to allow **at least 50 regional and local authorities** to conduct a comprehensive climate risk assessment.

²⁹ This includes but is not limited to [MYRIAD-EU](#) projects funded under the topics [HORIZON-MISS-2021-CLIMA-02-03](#) , [HORIZON-CL3-2021-DRS-01-02](#), [HORIZON-CL5-2022-D1-01-02-two-stage](#) and [HORIZON-CL3-2021-DRS-01-03](#), [GOBEYOND](#), [ANYWHERE](#), [C2IMPRESS](#)

³⁰ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

The grants for third parties should be used for conducting comprehensive climate risk assessments or refining existing ones, using the framework and toolbox developed under the 1st objective of this topic.

Eligible third parties are regional and local authorities in EU Member States and Horizon Europe Associated Countries (and/or other entities acting on their behalf), provided that they did not receive financial support under the CLIMAAX³¹ project nor the concerned territories were already covered by CLIMAAX.

At least 60% of the total amount of the EU requested contribution should be for financial support to third parties. Preferably, the (first) cascade call should be launched in the first 12 months of the project.

Proposals must describe how they intend to provide financial support to third parties, in accordance with the FSTP Annex provided with the application form. They should also specifically take account of provisions on ‘financial support to third parties’ set out in General Annex B and incorporate them into the proposal. While remaining as simple as possible, proposals should specifically consider elements within the FSTP scheme to address geographical balance and inclusivity/equity.

To this purpose, learning from the experience of projects with financial support to third parties/cascading funding could be considered: on top of consulting publicly available information on lessons learnt, the project retained for granting is expected to hold dedicated exchanges with the projects CLIMAAX, Pathways2Resilience and the Mission Secretariat during the preparation of the cascade funding call.

Moreover, the project should collaborate with the Mission National Hubs³² also in view of facilitating good practice sharing and replicability at National level.

General considerations

During its duration, the project should include an open support line or helpdesk to assist European regional and local authorities that are not financially supported by the project (2nd objective) but are nevertheless interested in using the toolbox to assess their climate risks.

The project is expected to identify and support ways by which the framework and toolbox may be applied more widely, including by the disaster risk management community (e.g. emergency responders, national civil protection agencies, disaster risk planners, Union [Civil Protection Knowledge Network](#)). To this end, the awarded project should collaborate with the Mission National Adaptation Hubs³³ to share best practices from regional and local authorities receiving the third-party grants and foster replicability at the national level. These could entail co-design, co-production, stakeholder involvement or similar activities so that the results of the project are beneficial for the mentioned policymakers or operational/rescue bodies.

³¹ This information is or will be publicly available on the website of CLIMAAX. For instance, here are the beneficiaries of the first call: <https://www.climaax.eu/first-regions-started-climate-risk-assessment/>

³² Established under topic HORIZON-MISS-2024-CLIMA-01-02

³³ Established by the project funded under topic HORIZON-MISS-2024-CLIMA-01-02

The proposals should explore ways to harvest the data generated as part of the project to increase the resolution and quality of European-wide climate risk datasets, assessments and responses. The assessments conducted under the project should be made available for any future reference and use through the Joint Research Centre's Risk Data Hub³⁴, the recognized Hub of climate risk knowledge as indicated by the EU Adaptation Strategy.

As an important contributor to the Adaptation Mission, the project awarded should cooperate with the Mission Implementation Platform³⁵, including (but not limited to) actively inform and engage with the regions and local authorities already involved in the Mission (e.g. Charter Signatories, Community of Practice), as those have shown their commitment to accelerate action on climate resilience. The project is also expected to contribute to the monitoring of the Mission and proposals are encouraged to link up their monitoring to the framework developed by the project stemming from HORIZON-MISS-2024-CLIMA-01-03 and dedicate appropriate resources to this task.

Finally, operational links and collaboration should be established with the [Climate-ADAPT platform](#); the relevant projects from the Mission³⁶; or other parts of Horizon Europe such as clusters 3 and 5 or other relevant EU programmes such as [LIFE](#) or the [Technical Support Instrument](#).

Applicants should acknowledge these requests and already account for them in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission.

HORIZON-MISS-2025-01-CLIMA-02: Supporting regional and local authorities in developing their Action Plans towards climate resilience

Call: Supporting the implementation of the Adaptation to Climate Change Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 25.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 25.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply:

³⁴ <https://drmkc.jrc.ec.europa.eu/risk-data-hub#/>

³⁵ Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. [About MIP4Adapt \(europa.eu\)](#)

³⁶ e.g. the projects from topics [HORIZON-MISS-2021-CLIMA-02-03](#), HORIZON-MISS-2025-01-CLIMA-02

	The page limit of the application is 70 pages.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries must provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 250,000³⁷, to allow regional and local authorities to develop their action plans that address the locally relevant climate risks.</p> <p>Eligible third parties are regional and local authorities in EU Member States and Horizon Europe Associated Countries (and/or other entities acting on their behalf), provided that they did not receive financial support under the Pathways2Resilience³⁸ project nor the concerned territories were already covered by Pathways2Resilience.</p>

Expected Outcome: In support of the European Green Deal, the Adaptation Strategy and the EU Mission on Adaptation to climate change, the successful proposal will accelerate adaptation efforts of regional and local authorities.

The project is expected to contribute to **all of** the following outcomes:

- Each Action Plan that regional and local authorities have developed sets in motion the implementation of a concrete list of actions to advance towards climate resilience.
- The implementation of the developed Action Plans is ensured thanks to the fact that each Action Plan includes a tailored analysis (or options list) of how the costs of each action can be addressed.
- The relevant government departments, citizens, academia, social partners, the private sector and other stakeholders are mobilised to contribute to local climate adaptation.

Scope: This topic relates to the Mission's first and second objectives³⁹ and aims to have **at least 70 regional and local authorities that will have formulated their climate adaptation Action Plans.**

³⁷ EUR 60,000 - the usual amount maximum amount that can be paid to a third party - is insufficient for a region or a local authority to develop action plans that fully address the complex nature of climate risks. Instead, and based on previous experience and review of the market for this type of work, it is considered that EUR 250,000 is more appropriate to cover various costs such as extensive stakeholder engagement and analysis, cost analysis and prioritization, monitoring activities. This is especially true for bigger regions.

³⁸ This information is or will be publicly available on the website of Pathways2Resilience. For instance, here are the beneficiaries of the first call: <https://www.pathways2resilience.eu/40-regions-unite-to-build-climate-resilience-for-53-million-europeans/>

³⁹ Specific objective 1: Preparing and planning for climate resilience; Specific objective 2: Accelerating transformations to climate resilience. Link to the Mission Implementation Plan: https://research-and-innovation.ec.europa.eu/system/files/2021-09/climat_mission_implementation_plan_final_for_publication.pdf

As described by the first European Climate Risk assessment and addressed by the Commission's [Communication on Managing Climate Risks](#), asymmetrical exposure to climate impacts exacerbates the already existing disparities between regions in terms of need for climate adaptation, risk prevention and preparedness.

This action supports the very heart of Mission Adaptation: since climate impacts and adaptive capacities differ greatly across regions, tailor-made responses and measures, at the regional or local levels, are required for positive and just transitions towards climate resilience. This action will provide the necessary tailored knowledge, expertise, and services to support regions and local authorities in the formulation of such Action Plans, as well as preparing the ground for the swift implementation needed to accelerate the transition.

Description of the Action Plans

The Action Plans should include:

- The analysis of different possible future scenarios and probabilities of impacts, including different solutions and innovations for relevant sectors, that are robust and cost-effective across these possible futures.
- A set of concrete actions to be implemented at the regional/local level (identifying the regional/local actors in charge of their implementation), including innovation activities and their quantified effects wherever possible.
- A timeline of implementation, including possible intermediate milestones.
- An indication of the expected costs for the region/local authority related to each action put forward by the Action Plan and for the entire Plan, and the estimated avoided losses.
- An analysis on how such costs can be addressed in particular by leveraging additional funding at regional, national, European levels⁴⁰ (including via private funding sources) and -where appropriate- other relevant non-financial considerations to facilitate implementation.
- A framework to monitor the implementation of the actions, based on the common framework developed by the project while facilitating synergies between such framework and the one created to monitor the implementation of Mission Adaptation.

The Action Plans should also include innovative solutions developed and tested in the context of Mission Adaptation, in view of enabling further replication: to do so, collaboration with the project stemming from HORIZON-MISS-2024-CLIMA-01-01 will be key.

While remaining fully centred around climate adaptation, the Action Plans – where appropriate and depending on the regional/local needs – are encouraged to address the nexus mitigation/adaptation by looking at co-benefits, including the interlinkage with other crisis

⁴⁰ Such as the CAP, Horizon Europe, LIFE, ERDF and Cohesion Fund, ESF+, Digital Europe Programme, Technical Support Instrument, InvestEU, Just Transition Fund, Erasmus+ programme.

(pollution and biodiversity loss). To avoid maladaptive practice, regions and local authorities are encouraged to conduct ex-ante evaluation of the actions planned.

The Action Plans should take into account the findings of the European Environment Agency's [European Climate Risk Assessment Report](#), as well as the information, outcomes and priorities identified in the national climate change adaptation strategies and in other relevant programmes or legal frameworks⁴¹.

The Action Plans should also include considerations on their social impacts and ways to overcome them, including by considering the 2030 Agenda for Sustainable Development.

To do so, the process of developing the Action Plans should be inclusive and participatory, engaging all relevant stakeholders, including public authorities from different levels of government, private sector, universities, civil society, social partners, and in particular citizens and vulnerable groups.

Financial support to third parties

Regional and local authorities will lead the development of their respective Action Plans.

Proposals should develop a common framework of intervention, setting-up the blueprint for the modular Action Plans that will need to be subsequently tailored to each beneficiary's context. Such general framework should also include the analysis of the possible additional sources of income that can be further leveraged in individual Action Plans.

The proposals must provide **financial support to third parties** in the form of grants to **allow at least 70 regional and local authorities** to develop their Action Plans to address the locally relevant climate risks.

Eligible third parties are regional and local authorities in EU Member States and Horizon Europe Associated Countries (and/or other entities acting on their behalf), provided that they did not receive financial support under the Pathways2Resilience⁴² project nor the concerned territories were already covered by Pathways2Resilience.

At least 70% of the total amount of the EU requested contribution should be for financial support to third parties. The (first) cascade call should be launched in the first 12 months of the project.

Proposals must describe how they intend to provide financial support to third parties, in accordance with the FSTP Annex provided with the application form. They should also

⁴¹ Such as the information provided by the European Climate and Health Observatory, the Copernicus Climate Change Service (C3S) National Collaboration Programme, as well as the outcomes and priorities of regional smart specialisation strategies established under Cohesion Policy, the Common Agricultural Policy, the Common Fisheries Policy, and the revised TEN-T Regulation (to be published). Moreover, the body of environmental law under the European Green Deal should be considered (including but not limited to the Nature Restoration Law under the Biodiversity Strategy).

⁴² This information is or will be publicly available on the website of Pathways2Resilience. For instance, here are the beneficiaries of the first call: <https://www.pathways2resilience.eu/40-regions-unite-to-build-climate-resilience-for-53-million-europeans/>

specifically take account of provisions on ‘financial support to third parties’ set out in General Annex B and incorporate them into the proposal. While remaining as simple as possible, proposals should specifically consider elements within the FSTP scheme to address geographical balance and inclusivity/equity.

To this purpose, learning from the experience of projects with financial support to third parties/cascading funding could be considered: on top of consulting publicly available information on lessons learnt, the project retained for granting is expected to hold dedicated exchanges with the projects CLIMAAX, Pathways2Resilience and the Mission Secretariat during the preparation of the cascade funding call.

Moreover, the project should collaborate with the Mission National Hubs⁴³ also in view of facilitating good practice sharing and replicability at National level.

Proposals & general considerations

Proposals should describe how the consortium would:

- Define and adopt a common framework guiding the assistance to the regional and local authorities.
- Structure and organise the selection of regional and local authorities and their local partner organisations.
- Support the regional and local authorities in the various steps of the process developing their Action Plans.
- Describe how it intends to integrate its work into the Mission and its activities so that knowledge and good practices can inspire others and be further replicated.

In fact, as an important contributor to the Adaptation Mission, the project should closely cooperate with the Mission Implementation Platform⁴⁴, including (but not limited to) actively inform and engage with the regions and local authorities already involved in the Mission (e.g. Charter Signatories, Community of Practice), as those have shown their commitment to accelerate action on climate resilience. The project is also expected to contribute to the monitoring of the Mission and proposals are encouraged to link up their monitoring to the framework developed by the project stemming from HORIZON-MISS-2024-CLIMA-01-03 and dedicate appropriate resources to this task.

Finally, operational links and collaboration should be established with [the Climate-ADAPT platform](#), and the relevant projects from the Mission, other parts of Horizon Europe or other relevant EU programmes⁴⁵ and initiatives⁴⁶.

⁴³ Established under topic HORIZON-MISS-2024-CLIMA-01-02

⁴⁴ Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. [About MIP4Adapt \(europa.eu\)](#)

⁴⁵ Such as Destination Earth.

Applicants should acknowledge these requests and already account for these obligations in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission.

HORIZON-MISS-2025-01-CLIMA-03: Demonstrating solutions to help hotspots in coastal regions to adapt to climate change

Call: Supporting the implementation of the Adaptation to Climate Change Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Demonstration activities must take place in the territory of at least 3 different coastal regional or local authorities, each established in a different Member States or Associated Country.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 to 8 by the end of the project – see General Annex B.

Expected Outcome: In support of the European Green Deal, the EU Adaptation Strategy and the EU Mission on Adaptation to Climate Change, successful proposals will support adaptation efforts in regional and local authorities located in coastal areas and identified as hotspot to climate change.

Projects results are expected to contribute to **all of** the following expected outcomes:

- Climate resilience solutions to protect citizens and activities in coastal regions have been demonstrated and are made largely available for upscaling. This includes social, governance, nature-based and digital solutions.
- Coastal regions, cities and local authorities (in the projects and beyond) have increased their climate resilience and are better prepared to adapt to climate change.

⁴⁶ For example, the project could look at lessons learnt from the Technical Support Instrument, which could provide support in the implementation of the Action Plans, while ensuring there are no overlaps or double funding.

Scope:

Rationale

As highlighted in the first [European Climate Risk assessment](#) by the European Environment Agency: Southern Europe, low-lying coastal regions (including many densely populated cities) and EU outermost regions are geographical ‘hotspots’ concentrating climate risks with high severity and demanding urgent action. On the other hand, the IPCC sixth assessment report recognised sea level rise as an “existential threat for coastal communities and their heritage, particularly beyond 2100”⁴⁷, also highlighting the urgency for increasing adaptation efforts. This is why **this topic specifically addresses coastal resilience in hotspot regions.**

Solutions sought

Proposals should identify approaches and demonstrate innovative solutions to increase climate resilience in coastal areas. They should explore, in a systemic way, how to best adapt to different pressures -- ranging from sea level rise (e.g., coastal floods, coastal erosion, saltwater intrusion) and invasive species to changing physical and chemical properties of the waters. Proposals should outline how the innovative solutions they put forward avoid maladaptation, consider equity and inclusivity and address long-term climate impacts (i.e. 2100 and beyond).

Nature-based solutions and ecosystem-based adaptation should be explored as a priority, in line with the [Mission Implementation Plan](#) and the [Nature Restoration Law](#) recently adopted. Blue-green infrastructures (as opposed to grey) may represent multipurpose, “no regret” solutions, which simultaneously provide environmental, social and economic benefits and help build climate resilience.

As coastal areas will likely need to undergo significant transformations to become climate-resilient (i.e. transformational adaptation is needed), proposals should integrate stakeholder and citizen engagement. In other words, the solutions put forward in the proposals are expected to be co-designed with regional and local stakeholders and tailored to their needs. To achieve this, the proposals should consider socio-economic impacts (including on vulnerable groups), social acceptability and expected population response to the proposed coastal adaptation measures and solutions. When assessing socio-economic impacts, trade-offs and co-benefits should be considered to ensure coherent and systemic approaches. Thus, this topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

⁴⁷ See Bednar-Friedl et al, 2022: Europe. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change
Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 1817–1927, doi:10.1017/9781009325844.015.

Looking into the potential of digital solutions for adaptation could be part of the proposals and would support the digital transition. This includes connecting climate adaptation measures to early-warning systems to limit the effects of extreme-weather events in near-real time.

Demonstration sites and related activities

The Mission encourages collaborations between coastal regional and local authorities facing similar challenges and considers this to be a very efficient approach to secure a large impact.

Proposal should address **all** the following aspects:

- Demonstration activities must take place in the territory of at least **3 different coastal regional or local authorities**, each established in a different Member States or Associated Country, with the involvement of these regional or local authorities (preferably participating in the consortium as a beneficiary or associated partner).
- The territory of **at least one** of those 3 demonstration activities **should be located in a “EUCRA hotspot area” -- i.e. Southern Europe⁴⁸, low-lying coastal area⁴⁹, or EU Member State outermost regions.**
- The proposals should already identify at least **3 “replicating” coastal regional or local authorities from 3 different Member States or Associated Countries**, interested in reapplying the lessons learnt (totally, partially or with the required adjustments) in their territories. For the replication, the consortium could include one or more partners that would provide support for the technical exchanges and the knowledge uptake in the “replicating” regions or local authorities. Replicating regions are not expected to conduct a demonstration or carry out on the ground activities already in the course of the project. However, replicating regions should at least prepare the theoretical framework for replicating the successful solutions (through exchanges with the demonstration regions), and explore means to fund the implementation of those solutions.

Links to the Mission and to other projects and initiatives

Proposals should build (when relevant) on existing knowledge and adaptation solutions, developed by previous projects and explore synergies with ongoing projects funded by EU and national programmes. The most relevant EU programmes and initiatives include Horizon 2020, Horizon Europe⁵⁰, Interreg, LIFE, and Copernicus⁵¹ and the EU Mission Restore our Oceans and Waters. Additionally, if any part of the proposal involves assessing climate risks,

⁴⁸ See [EUCRA’s definition](#) of Southern Europe

⁴⁹ Following the [IPCC](#), low elevation coastal zones are defined as ‘coastal areas below 10 m of elevation above sea level that are hydrologically connected to the sea.’

⁵⁰ Projects that could be particularly relevant include [R4C](#), [RESIST](#), [NBRACER](#), [TransformAr](#), [CLIMAREST](#), the Adapt4Coast cluster - [SCORE](#), [CoCliCo](#), [PROTECT](#), [REST-COAST](#), other [nature-based solutions projects](#), and projects funded under the topics HORIZON-CL6-2025-02-COMMUNITIES-03, HORIZON-MISS-2025-03-OCEAN-04, HORIZON-MISS-2025-03-OCEAN-05, HORIZON-MISS-2025-03-OCEAN-06.

⁵¹ Within the Copernicus Programme, particularly relevant to the proposals are the Copernicus [Marine Service](#) and [Coastal Thematic Hub](#).

then the risk assessment module should be fully compatible with the developments of the [CLIMAAX framework](#) (and, if applicable, its possible updates under topic ‘HORIZON-MISS-2025-01-CLIMA-01’).

Synergies with other funding sources (EU and national) should be sought to support the transfer of knowledge and innovative solutions to other regional and local authorities. This ranges from identifying opportunities to scaling up the solutions demonstrated and fostering their broad deployment across Europe. These funding sources could be public, private or a mix of both. Relevant public funding includes the LIFE programme, and its integrated projects in particular, the European Regional Development and European Maritime, Fisheries and Aquaculture Funds.

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Mission Implementation Platform⁵², and other relevant knowledge platforms such as [Climate-ADAPT](#). Projects funded under this topic will get direct access to and will be expected to participate in the exchanges of the Mission’s Community of Practice, to the networking activities supported by the Mission Implementation Platform, and to share relevant knowledge to feed the work of the project stemming from HORIZON-MISS-2024-CLIMA-01-01. These networking and joint activities could, for example, involve the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities.

In addition, projects will be requested to feed their results and contribute to the monitoring in place under the leadership of the Mission Implementation Platform on the progress towards the objectives of the Mission and provide information and data to contribute to the visualisation of the Mission progress in Europe. To that end, proposals are encouraged to (dedicate resources to) link up their monitoring to the framework developed by the project stemming from HORIZON-MISS-2024-CLIMA-01-03.

Applicants should acknowledge these requests and already account for them in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission.

HORIZON-MISS-2025-01-CLIMA-04: Testing and demonstrating innovative solutions to improve resilience to extreme heat, including addressing health impacts

Call: Supporting the implementation of the Adaptation to Climate Change Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and

⁵² Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. [About MIP4Adapt \(europa.eu\)](#)

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	selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Demonstration activities must take place in the territory of at least 3 different regional or local authorities, each established in a different Member States or Associated Country.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6 to 8 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).⁵³.</p>

Expected Outcome: In support of the European Green Deal, the EU Adaptation Strategy, the EU Mission on Adaptation to Climate Change and the EU Disaster Resilience Goals, project results are expected to improve adaptative capacities of European regional and local authorities to extreme heat and reduce the impacts on human health and well-being.

Projects results are expected to contribute to **all of** the following expected outcomes:

- Regional and local authorities are better prepared to withstand the impacts of extreme heat, therefore protecting their citizens (in particular, vulnerable groups), their health and well-being.
- Regional and local authorities are taking a leading role and actively involved in the development and testing of innovative solutions to deal with extreme heat.
- Regional and local authorities are actively exploring funding opportunities beyond Horizon Europe for the deployment of adaptation measures.

⁵³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Scope:

Rationale

With more frequent and intense heatwaves, extreme heat is the deadliest manifestation of climate change in Europe. It is estimated that, in the summer of 2022, heat was responsible for 60,000-70,000 premature deaths in Europe.

In fact, the [European Climate Risk Assessment](#) identifies heat as the largest and most urgent climate hazard for human health. Heat risks to the general population are already at critical levels in Southern Europe. More and urgent action is needed to reduce health risks, both from heat indoors and outdoors.

Extreme heat does not strike all the locations and all the population groups in the same way. For instance, Southern and Western-Central Europe and urban areas are more exposed to heatwaves. Areas away from the sea are also more exposed, as they are lacking any mitigation effect from the water. Similarly, extreme heat does not affect all groups in a specific location equally and this needs to be considered in the adaptation policies. Extreme heat is especially impacting the most vulnerable people due to a range of socio-economic and physiological factors, such as income (less capacity to invest in heat mitigating solutions), social exclusion, gender, age, disability, health conditions. As many vulnerable people spend a large part of their time indoors, ensuring heat resistant housing becomes of even more critical importance.

The goal of this topic is to accelerate the implementation of solutions that increase resilience to extreme heat and protect the health and well-being of the citizens, particularly in the built environment.

Solutions sought

Proposals should test and demonstrate effective solutions against the effects of extreme heat in the territories of regional / local authorities by addressing **all of** the following areas:

- Develop, demonstrate and evaluate **systemic** measures to **reduce and manage heat stresses in public and private spaces and in the built environment** also while avoiding maladaptation. This could include, but is not limited to, renovating/improving the design of buildings, redesigning the public spaces and/or implementing nature-based solutions (in line with the Nature Restoration Law).
- Develop and demonstrate **ready-to-go actions** for emergency services, public transport and utilities (water and energy) in case of extreme heat events, as well as support disaster preparedness and prevention planning (e.g., civil protection agencies).
- Explore and evaluate options for **innovative funding schemes** to implement the proposed heat resilience solutions for regions/local authorities, which are all operating in different contexts (e.g. jurisdiction, governance and local stakeholders).

Associated challenges, such as institutional and political bottlenecks, multi-level governance challenges, and the politics and justice dimensions of implementing innovative solutions all

fall within the remit of this topic. As a result, this topic requires the effective contribution of Social Sciences and Humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

For the successful implementation of the solutions and to ensure their sustainability beyond the duration of the project, the development and testing of the proposed solutions should be embedded, as much as possible in the adaptation planning of the regional or local authority participating in the project and/or in national plans.

Demonstration sites and related activities

The Mission encourages collaborations between regional and local authorities facing similar challenges and considers this to be a very efficient approach to secure a large impact. Therefore, the demonstration activities of the proposals:

- Must take place in the territory of **at least 3 different regional or local authorities**, each established in a different Member States or Associated Country, with the involvement of these regional or local authorities (preferably participating in the consortium as a beneficiary or associated partner).
- Should already identify at least **3 “replicating” regional or local authorities from 3 different Member States or Associated Countries**, interested in reapplying the lessons learnt (totally, partially or with the required adjustments) in their territories. For the replication, the consortium could include one or more partners that would provide support for the technical exchanges and the knowledge uptake in the “replicating” regions or local authorities. Replicating regions are not expected to conduct a demonstration or carry out on the ground activities already in the course of the project. However, replicating regions should at least prepare the theoretical framework for replicating the successful solutions (through exchanges with the demonstration regions), and explore means to fund the implementation of those solutions.

Links to the Mission and to other projects and initiatives

Proposals should build (when relevant) on existing knowledge and adaptation solutions developed by previous projects and explore synergies with ongoing projects funded by EU and national programmes. The most relevant EU programmes and initiatives include Horizon 2020, Horizon Europe⁵⁴, Interreg, LIFE programmes, the EU Mission Climate-Neutral and Smart Cities, Copernicus, Destination Earth and the New European Bauhaus.

Synergies with other funding sources (EU and national) should be sought, to support common approach towards climate adaptation, carbon neutrality, sustainability, transfer of knowledge and innovative solutions. This will also allow to identify opportunities to scale up the solutions demonstrated and to foster their broad deployment across Europe through other

⁵⁴ This includes but is not limited to projects funded by under the following topics [LC-GD-9-2-2020](#); [HORIZON-MISS-2023-CLIMA-01-03](#); [HORIZON-MISS-2024-CLIMA-01-08](#); [HORIZON-CL3-2024-DRS-01-03](#)

programmes such as the LIFE programme, and its integrated projects in particular, the Social Climate Fund, the European Regional Development Fund or the Just Transition Fund.

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Mission Implementation Platform⁵⁵, and other relevant knowledge platforms such as [Climate-ADAPT](#), the [European Climate and Health Observatory](#) and the [Copernicus Health Hub](#). Projects funded under this topic will get direct access and will be expected to participate in the exchanges of the Mission Community of Practice, to the networking activities supported by the Mission Implementation Platform, and to share relevant knowledge to feed the work of the project stemming from HORIZON-MISS-2024-CLIMA-01-01. These networking and joint activities could, for example, involve the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities.

In addition, projects will be requested to feed their results and contribute to the monitoring in place under the leadership of the Mission Implementation Platform on the progress towards the objectives of the Mission and provide information and data to contribute to the visualisation of the Mission progress in Europe. To that end, proposals are encouraged to (dedicate resources to) link up their monitoring to the framework developed by the project stemming from HORIZON-MISS-2024-CLIMA-01-03.

Applicants should acknowledge these requests and already account for them in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission.

HORIZON-MISS-2025-01-CLIMA-05: Better understanding incentives for private sector financing of adaptation solutions

Call: Supporting the implementation of the Adaptation to Climate Change Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the

⁵⁵ Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. [About MIP4Adapt \(europa.eu\)](#)

	Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ⁵⁶ .
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Expected Outcome: In support of the European Green Deal, the Adaptation Strategy and the EU Mission on Adaptation to Climate Change, project results are expected to pioneer ways to mobilise the private sector to finance adaptation solutions.

Project results are expected to contribute to **all of** the following expected outcomes:

- The private sector (in the broadest sense, including the business or financial sector, private investors, those that have available corporate social responsibility budget to invest, etc) is increasingly financing adaptation solutions. This can be for instance thanks to increased and improved range of investment concepts, financing mechanisms and/or business models.
- The private sector engagement with the Adaptation Mission is stepped up, from a few businesses having signed the Mission Charter as Mission's friends to businesses and the financial sector taking an active role in accelerating climate adaptation, including feeding knowledge to the Mission Community of Practice on best approaches.

Scope: Financing was highlighted by 93% of the Mission Charter signatories as the biggest challenge their region or local authority face⁵⁷. This was not unexpected and financing for adaptation is also one of the key enabling conditions identified by the [Mission Implementation Plan](#).

Adapting to the impacts of climate change requires mobilising significant resources, which can only be achieved by mobilising private and public funding alike. So far, the private sector involvement in financing implementation of adaptation measures and solutions has been quite limited. At this stage, climate adaptation generally relies to a large extent on some kind of public support.

As the impacts of climate change are expected to trigger significant economic losses and damages, which will affect the private sector in terms of increased financial strains and considerable risk (short-term and long-term), it is imperative that the private sector, including the financial sector, are part of the mind shift into acting for and funding climate preparedness. In this, the private sector needs to invest much more actively in climate adaptation efforts. This new mindset should include rethinking and redefining risk and

⁵⁶ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁵⁷ Analysis of information provided by the signatories of the charter of the Mission Adaptation to Climate Change, [70488a33-37b9-40f6-8b74-daca0f048f47_en \(europa.eu\)](#)

responsibility for adverse effects, considering risk allocation and obligations across public and private actors.

The proposal should identify economic (non-financial) incentives for the private sector to finance adaptation solutions. The proposal should address **all of** the following aspects:

- **Developing calculations and the most appropriate methodologies for calculating the economic rationale** for financing adaptation solutions, aimed at convincing the private sector to finance them. This could include, but is not limited to, the following: (i) calculations of the risks/losses caused by climate change; (ii) calculations of the economic benefits of the adaptation solutions across different time horizons (e.g. with new or retained revenues/contributions that the implementation of the adaptation solution could generate, avoided costs/losses, cost of inaction, lower insurance costs, attribution and monetisation of co-benefits (including social and environmental co-benefits)); and (iii) calculations of the overall cost/benefit.

Ideally, if all benefits are calculated, they can outweigh the costs. Such calculations and economic rationales may need to be different for the different climate risks and key community systems.

- **Identifying how to overcome in innovative ways the main barriers** to the financing of climate adaptation solutions by the private sector (both from the investor and investee point of view) and how to improve the economic rationale and **developing and test innovative ways to economically incentivise (in non-financial ways)** the private sector to finance them. This could include an increased and improved range of investment concepts or strategies, financing mechanisms and/or business models, etc. These innovative ways may need to be different for the different climate risks and key community systems.
- Testing the above by developing minimum 8 case studies, in 3 different Member States / Associated Countries. The case studies should work on adaptation solutions that require financing but have not yet found financing. Each case study should explicitly encompass a calculation of the economic rationale for financing (as per above) and, where in this calculation all benefits taken together do not exceed the cost and hence this is not a sufficient incentive, propose and test innovative ways to economically incentivise (in non-financial ways) the private sector to finance the proposed adaptation solutions. In at least 3 of the cases the adaptation solutions should be nature-based adaptation solutions. It will be considered as a positive element if the case studies cover a variety of climate hazards and key community key community systems identified in the [Mission Implementation Plan](#), namely critical infrastructure, health & well-being, water management, land use & food systems, ecosystems.

To reasonably achieve the expected outcomes, the project consortia should include participation of relevant private sector actors from the business and financial sectors and their commitment to further contribute to the deployment of the solutions identified in the cases

studies or to support the development of the business plan for the climate resilience investments beyond the duration of the project.

Due to its nature, this topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

In addition to the standard dissemination obligations, the results of this action should be promoted towards the Mission's Community of Practice, to allow broad replication. The format should be adapted to the target audience being the private sector, so presenting the case studies and the lessons learnt in a practical and attractive manner.

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Mission Implementation Platform⁵⁸, and other relevant knowledge platforms such as [Climate-ADAPT](#). Projects funded under this topic will get direct access to and will be expected to participate in the exchanges of the Mission's Community of Practice, to the networking activities supported by the Mission Implementation Platform, and to share relevant knowledge to feed the work of the project stemming from HORIZON-MISS-2024-CLIMA-01-01. These networking and joint activities could, for example, involve the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities.

In addition, projects will be requested to feed their results and contribute to the monitoring in place under the leadership of the Mission Implementation Platform on the progress towards the objectives of the Mission and provide information and data to contribute to the visualisation of the Mission progress in Europe.

Applicants should acknowledge these requests and already account for them in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission.

Finally, proposals should, also through the Mission Implementation Platform, build on knowledge from and connect to the other relevant projects funded by Horizon Europe⁵⁹, LIFE and Technical Support Instrument (TSI) and other EU and national funding programmes.

HORIZON-MISS-2025-01-CLIMA-06: Pre-commercial procurement of breakthrough solutions for climate proofing of public buildings

Call: Supporting the implementation of the Adaptation to Climate Change Mission
Specific conditions

⁵⁸ Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. [About MIP4Adapt \(europa.eu\)](#)

⁵⁹ The projects [CLIMATEFIT](#), [P2R](#), [FARCLIMATE](#), [PIISA](#), [SOTERIA](#), [NATURE DEMO](#), e.g. [BIOFIN](#) and [GoNaturePositive](#) and [EuropaBON](#) and projects funded under HORIZON-MISS-2024-CLIMA-01-06 could particularly relevant

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Pre-commercial Procurement
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The specific conditions for actions with PCP/PPI procurements in section H of the General Annexes apply to grants funded under this topic.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: PCP/PPI procurement costs are eligible.

Expected Outcome: The successful proposal will contribute to the implementation of the EU Mission on Adaptation to Climate Change, allowing local and regional authorities to address their climate risks and accelerate preparedness and resilience to the changing climate.

Proposals are expected to contribute to **all of** the following outcomes:

- Customisation/pre-operationalisation of customer-tailored solutions in the area of climate adaptation of **public buildings**, that respond to the common needs and beyond state-of-the-art performance targets of the buyers group.
- Reduction of fragmentation of demand for innovative solutions by enabling public procurers to collectively implement a Pre-Commercial Procurement (PCP) in the area of climate proofing of buildings, aggregating demand in an area subject to legislation and procedures that, due to its nature, is better/more efficiently addressed jointly, or which they would not have been able to tackle independently.
- New opportunities for wide market uptake and economies of scale for the supply side through the use of joint specifications, wide publication of results and – where relevant – contribution to standardization, regulation or certification to remove barriers for introduction of innovations into the market and creation of new products, processes and/or services ready for market uptake, leading to viable new businesses, jobs and sustainable economic growth.

Scope:

Rationale and background

Buildings are vulnerable to climate change in different ways. For example, climate change can increase their risk of collapse, damage their construction materials, and even threaten their structural integrity. It can also cause significant loss of value because of more storms, snow or subsidence damage, water encroachment, deteriorating indoor climate and reduced building lifetime.

Besides impacting the structural features of a building, climate change can influence the conditions under which people live, work and interact indoors. An inability to properly regulate indoor temperatures may lead to thermal discomfort for users, potentially negatively impacting health, well-being, and productivity. In most places, users need to use heating and cooling systems to cope with thermal discomfort brought about by temperature extremes.

The [EU Strategy on Adaptation to Climate Change](#) includes several actions tackling the climate risk of the built environment, while being mindful of the cross-cutting relevance of buildings within the European climate policy. The Strategy flags the need to improve the preparedness of buildings to climate change. Furthermore, the Strategy is mindful of buildings' role in large-scale adaptation, for instance in curbing the urban heat island effect by means of green roofs and walls, and of the need for more accurate predictions of climate change stresses on the built environment. At the building level, investment policy decisions need to be underpinned with solid climate data - including household-scale decisions on whether to renovate. In terms of buildings' insurance, a key priority of the Strategy is to close the climate protection gap for infrastructure and for the built environment. The water-energy nexus is also crucial, and the building sector can help tackling the related vulnerabilities.

The Strategy, and the Adaptation Mission which is a key implementing vehicle of the Strategy at the local level, gives priority to [nature-based solutions](#) such as green roofs and walls. In buildings, for instance, nature-based solutions can be a sustainable alternative to the sole use of air conditioning for cooling. [Green infrastructure measures](#) (green corridors, green urban areas, trees in cities as well as green roofs and walls) can increase resilience of the built environment particularly when integrated in urban planning and coupled with nature-based solutions. The PCP should look at nature-based solutions as priority; other approaches or combination with those are not excluded, when duly justified.

The 2020 [Renovation Wave Communication](#) explicitly envisaged at doubling renovation rates in the European building stock, ensuring higher energy and resource efficiency. It also pointed to the importance of standards for heating and cooling in buildings, while considering vulnerable people and improving society's readiness towards heatwaves. The revision of the [Green Public Procurement criteria for office buildings](#) has covered climate resilience criteria, based on indicators developed within the new [European framework for sustainable buildings](#).

The [Directive on Energy Performance of Buildings](#) and the [Energy Efficiency Directive](#) provide guidance on how buildings should be taking into account climate related considerations. In addition, the European Commission has also produced [EU-level guidance on the climate resilience of buildings](#) in March 2023.

The EU has been supporting the advancement of knowledge on how to increase the resilience of the built environment regularly, supporting through various research programmes the development of innovative ideas. This is also an area of potential synergies with Mission Cities and the New European Bauhaus initiative.

Supported Activities:

This PCP – i.e. a joint procurement of research and development services - is launched to **reinforce public demand-driven innovation in developing solutions to climate proof public buildings**. PCP has the potential to be an effective demand side action and a useful tool to close the gap between supply and demand for innovative solutions.

The PCP should deliver successful innovative and fully tested product(s) and/or service(s) that meet the common needs of the buyers' group (consortium of procurers) to procure research, develop innovative marketable solutions, speed up the time-to-market and provide best value for money.

This action supports the follow up to the July 2023 Communication⁶⁰ on EU Missions assessment.

Activities should include:

- Preparation of the relevant documentation needed to launch and implement the procurement procedure;
- Joint research activities relating to the customisation/pre-operationalisation of prototypes end-user services in the area of climate change adaptation and mitigation validating the PCP strategy;
- Activities for the follow-up of the joint procurement, such as activities for awareness raising, networking, training, evaluation, validation and dissemination of results.

The core of the consortium should be a qualified “buyers’ group” (public procurement consortium), able to implement the action. Additional partners such as business/SME support organisations, innovation agencies or sectoral organisations may be included to assist procurers in knowing what is available on the market through market consultations. The project is expected to have a maximum estimated duration of 3 years.

The proposal should describe the jointly identified challenge, indicating how it fits into the mid-to-long-term plans of the consortium partners to improve climate resilience in their territories, why solutions currently available on the market or under development are not meeting their needs, and put forward concrete targets for the desired functionality/performance improvement in the quality and efficiency of the required solutions.

⁶⁰ Commission Communication: EU Missions two years on: assessment of progress and way forward [COM\(2023\) 457 final](#) and Commission Staff Working Document: COMMISSION STAFF WORKING DOCUMENT EU Missions two years on: An assessment of progress in shaping the future we want and reporting on the review of Mission Areas and areas for institutionalised partnerships based on Articles 185 and 187 TFEU [SWD\(2023\) 260 final](#)

The proposal should also explain clearly how the creation of jobs, sustainable economic growth and new businesses will be assessed as an integral part of the successful application.

Links to the Mission

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Mission Implementation Platform⁶¹, the Mission's [Community of Practice](#), and other relevant knowledge platforms such as [Climate-ADAPT](#) or Copernicus.

Applicants should acknowledge these requests and already account for them in their proposal, making adequate provisions in terms of resources and budget to engage and collaborate with the Mission.

Adaptation to Climate Change: Other Actions

1. Sustaining the Mission Implementation Platform for the Adaptation to Climate Change Mission

Under this public procurement, the following services are expected to be provided:

- Well-coordinated support to the general operation and activities of the Adaptation to Climate Change Mission, as valid service to the European Commission in the broad range of activities involved with the implementation of the Mission;
- Coordination and facilitation of the Mission Community of Practice, in all its articulations (such as virtual and physical events, thematic working groups etc.), proving engaging involvement and opportunities for exchanges for all involved actors and regions, in relation to the actions they are undertaking in the field of climate resilience building;
- Continuous and ad hoc monitoring and assistance to the European Commission in relation to any Mission evaluation, by maintaining and improving the current monitoring framework, further refining monitoring tools and KPI for the Mission, producing timely reporting on progress.
- Assistance to the Commission with the overall communication on the Mission, through the different relevant channels including the Mission Portal, broadly towards citizens and also specific target audiences, helping to identify and create synergies and add value to communication, dissemination and exploitation activities of individual projects of the Mission's portfolio, and boost scientific, societal and economic impacts.
- Organisation of the annual forum, catering for all related logistics and communication
- On the ground support to regions and local authorities participating in the Mission in organising regional and local events involving citizens and stakeholders.

⁶¹ Currently managed by MIP4Adapt under the contract CINEA/2022/OP/0013/SI2.884597 funded by the European Union. [About MIP4Adapt \(europa.eu\)](#)

This action supports the follow-up to the July 2023 Communication⁶² on EU Missions assessment.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q2 of 2025

Indicative budget: EUR 6.00 million from the 2025 budget

2. Studies, conferences, events and outreach activities

Subject matter of the contracts envisaged: studies, conferences, events and outreach activities within the scope of the EU Mission on Adaptation to Climate Change.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: 2025

Indicative budget: EUR 0.14 million from the 2025 budget

3. Support regional and local authorities in their efforts to conduct climate risks assessments

Provide guidance and support to EU regions and local authorities that have engaged with the Mission on Adaptation to Climate Change and beyond, by the provision of authoritative climate data at different granularity scale, including the local one.

Make available to EU regions and local authorities that have engaged with the Mission on Adaptation to Climate Change and beyond the [Risk Data Hub](#) entire potential, by creation of ad-hoc and plug in modules, users guidelines and digital interfaces designed for the target audience, to allow easy and user-friendly access to the entire realm of the Risk Data Hub functionalities.

Facilitate the development of specific synergetic actions in relation to data management and data reporting in the area of climate adaptation among the Mission on Adaptation to Climate Change and other Horizon Europe, EU and national programmes and policies implementation (such as on risk reduction and management).

The action will be implemented by a service level-agreement (Article 59 of the Financial Regulation).

⁶² Commission Communication: “EU Missions two years on: assessment of progress and way forward” [COM\(2023\) 457 final](#) and Commission Staff Working Document: “EU Missions two years on: An assessment of progress in shaping the future we want and reporting on the review of Mission Areas and areas for institutionalised partnerships based on Articles 185 and 187 TFEU” [SWD\(2023\) 260 final](#)

Type of Action: Provision of technical/scientific services by the Joint Research Centre

Indicative timetable: Second quarter of 2025

Indicative budget: EUR 0.50 million from the 2025 budget

DRAFT

Cancer: Supporting the implementation of the Cancer Mission

The goal of the Mission on Cancer is to improve the lives of more than 3 million people by 2030, through prevention, cure and for those affected by cancer including their families, to live longer and better. The four Cancer Mission objectives are: Understand; Prevent what is preventable; Optimise diagnosis and treatment; Support quality of life. Its five transversal priorities are: ensure equitable access in all aforementioned areas, innovation, childhood cancer, personalised medicine and citizen engagement. The Mission on Cancer will address all cancers including poorly-understood cancers⁶³ in men and women, cancers in children, adolescents and young adults as well as in the elderly, cancers in socio-economically vulnerable populations, living in either cities, rural or remote areas, across all Member States and Associated countries.

The Mission on Cancer is implemented using a health-in-all policies approach;⁶⁴ through infrastructure support; regional, social and citizen community development; through investments; support and commitments from public and private sources, including from Member States, Associated countries and industry; through cooperation with third countries; and through synergies with other EU programmes including EU4HEALTH, EURATOM, Digital Europe (for example the Genomics Data Infrastructure⁶⁵ and the Cancer Image Europe initiative⁶⁶), Erasmus+, the EU Strategic Framework on Health and Safety at Work 2021-2027, and other initiatives related to health and cancer.

It also relates to the European Green Deal, including the Zero Pollution Action Plan⁶⁷ and the Farm to Fork strategy⁶⁸. The mission proposes research, innovation and policy directions and objectives to identify effective strategies for the development and implementation of cancer prevention, including on environmental and behavioural factors (e.g. exposure to carcinogens, air pollution, unhealthy diet, nutrition, and low physical activity).

Furthermore, it is also in line with the industrial⁶⁹ and digitalisation strategy⁷⁰. The Mission proposes a further upscaling and digitalisation of services, innovation in diagnostics and interventions, and establishing living labs, contributing to the positive impact of efforts by industry and SMEs on the health of citizens. Envisaged opportunities are in the fields of cancer biomarkers, cloud computing and digital applications, and smart apps/sensors. The Mission also supports the integration of AI, machine learning and deep learning approaches to

⁶³ Includes refractory cancers or cancer subtypes, at any stage of the disease in any age group and part of society with a 5-year overall survival that is less than 50% from time of diagnosis.

⁶⁴ Health in All Policies is an approach to public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts in order to improve population health and health equity.
https://www.who.int/social_determinants/publications/health-policies-manual/key-messages-en.pdf

⁶⁵ <https://gdi.onemilliongenomes.eu/>

⁶⁶ <https://cancerimage.eu/>

⁶⁷ Particularly the Flagship 1 of the Zero Pollution Action Plan: “Reducing health inequalities through zero pollution”

⁶⁸ https://ec.europa.eu/food/farm2fork_en

⁶⁹ https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy_en

⁷⁰ https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age_en

facilitate a better understanding of cancer, to improve prevention screening and early detection, diagnosis, clinical decision-making, administration of combinational therapies, and clinical management of patients living with and after cancer.

Calls for proposals under this Mission should contribute to setting out a credible pathway for implementing the Mission on Cancer, thereby contributing to mission objectives.

Successful proposals under this Mission should set out a credible pathway to contribute to improving cancer control, and more specifically to all of the following impacts:

- Improve understanding of cancer in the context of the environment, work, and lifestyle in the broadest possible sense;
- Enhance cross-policy cancer prevention, screening and early detection strategies;
- Optimise the diagnosis and treatment of cancer based on the principle of equitable access;
- Improve the quality of life of cancer patients, survivors and their families through widely analysing all key factors and needs that are related to the quality of life;
- Accelerate the digital transformation of research, innovation and health systems.

The implementation plan specifies the goal and four main objectives as well as implementation details of the Mission on Cancer⁷¹.

In the call for proposals described below, the Commission envisages several actions⁷²:

Work programme 2025

For 2025, on the Cancer Mission objective *Understanding*, the Commission envisages to foster collaboration of national and regional funders on translational cancer research and will support an action to better understand the effects of environmental exposure on the risk of paediatric, adolescent and young adult cancers.

On the Cancer Mission objective *Prevention and early detection*, the Commission envisages – in collaboration with the Cities Mission – to boost prevention through cycling and walking while reducing greenhouse gas emissions from transport.

On the Cancer Mission objective *Diagnosis and treatment*, the Commission will support actions to innovative surgery, targeting cancer patients with metastatic disease and investigator-initiated multinational early-stage clinical trials for paediatric cancer.

⁷¹

https://ec.europa.eu/info/sites/default/files/research_and_innovation/funding/documents/cancer_implementation_plan_for_publication_final_v2.pdf

⁷²

The listed areas for potential actions are tentative and non-binding

On the Cancer Mission objective *Quality of life*, the Commission envisages to support pragmatic clinical trials to enhance the quality of life of older cancer patients (65 years and older) through nutrition.

Lastly, the Commission will support the network of National Cancer Mission Hubs (NCMHs).

Proposals are invited against the following topic(s):

HORIZON-MISS-2025-02-CANCER-01: Sustained collaboration of national and regional cancer funders to support the Cancer Mission through translational research

Call: Supporting the implementation of the Cancer Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold is 12.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁷³ .

Expected Outcome: The successful proposal should aim to deliver results that are directed and tailored towards and contribute to all the following expected outcomes:

⁷³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- National and regional cancer funders across Europe (i.e. representing Northern, Southern, Central, Eastern and Western Europe), based on a common strategic research and innovation agenda, deliver:

1. At least four transnational calls for proposals addressing translational cancer research, resulting in collaborative grants to academic investigator-led third parties;
2. Streamlined national, regional and foundation-based or charity-based practices in organising peer-reviewed translational cancer research and innovation funding between the partners, with attention to exploring novel funding schemes and initiatives as well as sustainability of a network of funders where appropriate;

Scope: Common challenges in translational cancer research require effective transnational cooperation on prioritised efforts, leveraging national, regional and charity-based resources and appropriate funding schemes. Important achievements of translational cancer research funding by long-term collaboration of national and philanthropy funding organisations have been obtained by the TRANSCAN network under the Seventh Framework Programme for Research and Innovation (2007-2013) and Horizon 2020 (2014-2020)⁷⁴.

More efforts are warranted to address the potential for sustainable coordination, the access to and sharing of research data to enhance the understanding of cancer as well as to further the alignment of national, regional and foundation or charity-based cancer research and innovation programmes and activities in Member States and Associated Countries. The EU contribution will **not** be used to co-fund the grants to third parties described hereunder.

The proposal should address all the following:

- Align, coordinate and support efforts from and between national and regional public and private research funding programmes on translational cancer research to issue at least four joint transnational calls which are integrated with the Cancer Mission and the Europe's Beating Cancer Plan;
- Pool the necessary financial resources from the participating national and regional research programmes as well as, where appropriate, leverage resources from pertinent foundations, charities and transnational initiatives, to support at least four joint transnational calls for proposals which are integrated with the Cancer Mission and the Europe's Beating Cancer Plan, while avoiding overlaps with EU-funded research under Horizon Europe;
- Demonstrate the potential impact of collaboration between national and regional transnational research and innovation programmes, as well as demonstrate a leverage effect on European and national research and competitiveness using key indicators;

⁷⁴

<https://transcan.eu/>

- Consider novel funding schemes and joint activities such as analyses of research and innovation funding programmes, impact, dissemination, citizen (including cancer patients), engagement, and training;
- Datasets produced by collaborative grants to academic investigator-led third parties should be made FAIR whenever possible, while tools and models should follow the principles of open science, taking advantage of current European research infrastructures and supporting the future UNCAN.eu research data platform.

This action supports the follow-up to the July 2023 Communication on EU Missions assessment⁷⁵.

HORIZON-MISS-2025-02-CANCER-02: Understanding the effects of environmental exposure on the risk of paediatric, adolescent and young adult cancers

Call: Supporting the implementation of the Cancer Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.45 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold is 12.</p>

Expected Outcome: Project results are expected to contribute to some of the following expected outcomes:

- Researchers and health professionals will advance our understanding on how environmental, genetic and epigenetic, omics and other factors interact in determining

⁷⁵

eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023DC0457

the onset and development of cancers in children, adolescents and young adults and how they impact health outcomes in young cancer patients.

- Policymakers and public health authorities have scientific evidence to improve prevention strategies to minimise the impacts of environmental factors on the development and progression of paediatric, adolescent and young adult cancers.
- Researchers, innovators, and professionals from across different disciplines and sectors will support and contribute to the future UNCAN.eu research data platform by ensuring interoperability of data, new digital tools and models.

Scope: This topic contributes to the Cancer Mission objectives by improving the understanding of the impact of environmental exposures⁷⁶ including, their interaction with other relevant factors on cancer onset⁷⁷ and progression and/or other relevant health outcomes along the cancer patient journey. The age group of interest for this topic includes children, adolescents and young adults (less than 40 years of age at first cancer diagnosis).

Applicants should take advantage of technological advances which have opened up new opportunities to collect, combine and analyse large datasets of diverse types, offering new possibilities to design epidemiological studies to understand the mechanistic contribution of environmental factors, in combination with other individual and contextual factors⁷⁸ as appropriate. Innovative and data intensive approaches are expected for the identification of time windows of susceptibility⁷⁹ and of robust biomarkers of cumulative environmental exposure.

Proposals may envisage the creation of large cohort(s) by pooling and integrating existing retrospective studies in the areas of clinical research, exposome research, cancer registries and complementing with the new collection of other relevant data where needed (other omics data, digital pathology, behavioural and socio-economic data, clinical records etc.). Sex and gender differences should be duly considered. The use of causal interference, computational modelling and/or artificial intelligence tools are encouraged for the analysis and management of big, complex and heterogeneous data sets. All datasets produced should be described with metadata records in the EU dataset catalogue of the future European Health Data Space⁸⁰ while all tools and models should follow the principles of open science and be made available through the future UNCAN.eu platform.

The applicants should address several of the following activities:

- Identify, validate and document different types (and/or combinations) of biomarkers for the development of robust quantitative measures of the effects of cumulative environmental exposures associated with cancer onset;

⁷⁶ The exposure to potentially harmful chemical, physical or biological agents in the environment

⁷⁷ Including early onset cancer

⁷⁸ Examples are genetic, epigenetic and -omic characteristics, lifestyle, socio-economic factors, clinical status and clinical circumstances

⁷⁹ In utero exposures might be included if relevant

⁸⁰ <https://healthcat-ap.github.io/>

- Elaborate and test cost effective approaches for measuring biomarkers of cumulative environmental exposure in large paediatric, adolescent and young adult populations, also by applying new analytical tools and novel methods of analysis;
- Identify individual signatures (e.g. based on genetic, epigenetic, multi-omic characteristics), and time windows conferring susceptibility to environmental hazards associated with cancer onset and progression in children, adolescent and young adults at different stages of the life course;
- Identify clinical states, lifestyle and socio-economic factors and circumstances that increase the risk of adverse health outcomes associated with exposure to environmental hazards in different time windows in young cancer patients;
- Develop new tools and methods to combine and analyse multimodal data, including the application of novel data-intensive methods of analysis, while ensuring interoperability with the future UNCAN.eu research platform and taking advantage of current European research infrastructures.

Advantage should be taken to the extent possible of data and experience gained under current large-scale initiatives such as: the European Human Exposome Network (EHEN)⁸¹, the European Partnership for the Assessment of Risks from Chemicals (PARC)⁸², the clusters of projects under the environment, climate and health research portfolio⁸³ and the projects under the 'Understanding' project cluster of the Cancer Mission⁸⁴. The relevant EU research and health infrastructures should be exploited for available digital tools and services for dataset creation, standardisation, data discovery, secure access, management, visualization, harmonization, analysis and other functions as appropriate. Successful proposals are expected to establish appropriate collaborations with HORIZON-MISS-2024-CANCER-01-01 'Use cases for the UNCAN.eu research data platform'.

The Commission will facilitate coordination with other EU initiatives. Proposals should include a budget for networking, attendance at meetings and joint activities⁸⁵ of the 'Understanding' project cluster of the Cancer Mission⁸⁶.

Proposals should consider the involvement of the European Commission's JRC regarding its experience in this field and with respect to the value it could bring in providing an effective

⁸¹ <https://www.humanexposome.eu/>

⁸² <https://www.eu-parc.eu/>

⁸³ https://research-and-innovation.ec.europa.eu/research-area/health/environment-and-health_en

⁸⁴ https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/eu-mission-cancer/implementation-page/cancer-mission-objectives_en#understanding-of-cancer.

⁸⁵ Examples of these activities are research or research capacity, organising joint workshops, establishing best practices, joint communication or citizen engagement activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate. Proposals are not required to include details of these activities, as they will be defined during the grant agreement preparation and during the life of the project.

⁸⁶ In order to address the objectives of the Cancer Mission, participants will collaborate in project clusters to leverage EU-funding, increase networking across sectors and disciplines, and establish a portfolio of Cancer Mission R&I and policy actions.

interface between research activities and pre-normative science as well as strategies and frameworks that address regulatory requirements. In that respect, the JRC will consider collaborating with any successful proposal and this collaboration, when relevant, should be established after the proposal's approval.

Applicants envisaging to include clinical studies should provide details in the dedicated annex using the template provided in the submission system.

HORIZON-MISS-2025-02-CANCER-03: Innovative surgery as the cornerstone of affordable multi-modal therapeutic interventions benefitting cancer patients with locally advanced or metastatic disease

Call: Supporting the implementation of the Cancer Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 7.00 and 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 31.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold is 12.

Expected Outcome:

Proposals under this topic should aim to deliver results that are directed and tailored towards, and to contribute to all of the following expected outcomes:

- Patients have access to tailored, affordable, effective and—when appropriate—minimally-invasive surgery-centred, multi-modal treatment interventions targeting locally advanced or metastatic disease;
- Researchers, innovators⁸⁷, SMEs and other professionals from different disciplines and sectors have access to innovative surgery-centred treatment technology and medical devices for further improvements and validation;
- National healthcare providers, policymakers and authorities in European regions, Member States and Associated Countries have the evidence to implement affordable

⁸⁷ Innovators turn research results into new and better services and products, to remain competitive in a global marketplace and to improve the quality of life of Europe's citizens

surgery-centred treatment solutions that benefit cancer patients with locally advanced or metastatic disease in their healthcare systems;

Scope: Cancer surgery⁸⁸ represents the main first line treatment for solid tumours. While cancer patients with locally advanced or metastatic disease across Europe are often excluded from clinical studies, they would benefit from access to tailored, affordable, innovative, surgery-centred interventions, which are adapted to an increasingly precision oncology healthcare landscape.

Proposals should address all of the following:

- Validate innovative surgery-centred, multi-modal treatment interventions to treat cancer patients with locally advanced or metastatic disease. When appropriate, investigators should consider minimally-invasive surgical treatment interventions combined with either relevant medical devices or other multimodal treatment interventions⁸⁹;
- The chosen surgery-centred intervention(s) should be validated through academic investigator-initiated clinical trials. Translational research is limited to supporting the conduct and analyses of the proposed clinical trial(s);
- The chosen surgery-centred treatment intervention(s) should be adapted to the needs of the target population and the specificities of healthcare provision at local, regional, or national level, duly reflecting the (cultural) diversity and available resources across Member States and Associated Countries. Data should be disaggregated by sex, gender, age and other relevant variables, such as by measures of socio-economic status or ethnicity;
- The primary and secondary endpoints of the clinical trial(s) should support overall survival, patient-reported outcomes and quality of life issues. Such endpoints should be defined together with patients and their caregivers through research that stimulates social innovation and supports end-user engagement using participative research models;
- Affordability of the chosen surgery-centred treatment intervention(s) should be demonstrated via a cost-effectiveness analysis.
- Include an appropriate mix of stakeholders from various disciplines and sectors, such as physicians, academia, patients and their caregivers, patient representatives, SMEs, insurance companies, engineers, physicists, charities, foundations, research and innovation organisations, civil society, regional as well as national health authorities;

⁸⁸ A non-exhaustive list of types of surgeries: open surgery, minimally-invasive surgery using laparoscopy or endoscopy, robotic surgery, laser surgery, cryosurgery, radiosurgery (such as ‘gammaknife’, cyberknife, radiofrequency and microwave ablation).

⁸⁹ A non-exhaustive list of other treatment interventions to combine with innovative surgery may include: intra-operative radiotherapy, chemotherapy, electro-chemotherapy, photodynamic therapy, radiotherapy, targeted therapy, immunotherapy, hyperthermia or thermal ablation, transplantation or any other combination

- All datasets produced should be described with metadata records in the EU dataset catalogue of the European Health Data Space while all tools and models should take advantage of current European research infrastructures, should follow the principles of open science and be made available through the future UNCAN.eu platform⁹⁰.

This topic requires the effective contribution of Social Sciences and Humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise in the successful proposal, to produce meaningful and significant effects enhancing the societal impact of the related research activities.

The successful proposals are expected to build on resources made available by the Knowledge Centre on Cancer (KCC)⁹¹ to foster EU alignment and coordination.

The Commission will facilitate coordination. Therefore, successful proposals will be asked to join the 'Diagnosis and Treatment' cluster for the Cancer Mission⁹² and should include a budget for networking, attendance at meetings, and joint activities⁹³.

Applicants should provide details of the clinical studies in the dedicated annex using the template provided in the submission system.

HORIZON-MISS-2025-02-CANCER-04: Investigator-initiated multinational early-stage innovative clinical trials for paediatric cancer

Call: Supporting the implementation of the Cancer Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 25.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility</i>	The conditions are described in General Annex B. The following

⁹⁰ <https://healthdcap.github.io/>

⁹¹ Hosted by the European Commission's Joint Research Centre (JRC). Especially through the 'European Guidelines and Quality Assurance Schemes for Breast, Colorectal and Cervical Cancer Screening and Diagnosis', and the 'European Cancer Information System (ECIS)' and the 'European Cancer Inequalities Registry (ECIR)', see https://knowledge4policy.ec.europa.eu/cancer_en

⁹² In order to address the objectives of the Cancer Mission, participants will collaborate in project clusters to leverage EU-funding, increase networking across sectors and disciplines, and establish a portfolio of Cancer Mission R&I and policy actions.

⁹³ Examples of those activities are research or research capacity, organising joint workshops, establishing best practices, joint communication or citizen engagement activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate. Proposals are not required to include details of these activities, as they will be defined during the grant agreement preparation and during the life of the project.

<i>conditions</i>	<p>exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold is 12.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering children and adolescents, grants will be awarded not only in order of ranking but also to at least:</p> <ul style="list-style-type: none"> • one highest ranked application that targets the age group 0-14 (children); and • one highest ranked application that targets the age group 15-19 (adolescents) <p>provided that these applications attain all thresholds. Applications targeting both age groups (0-14 and 15-19) will be considered to be within both age groups for the purposes of the application of the condition above.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁹⁴.</p>

Expected Outcome:

Proposals under this topic should aim to deliver results that are directed and tailored towards and contribute to all of the following expected outcomes:

- Children and adolescents with cancer have access to innovative, more effective, less toxic treatments—both in terms of acute toxicity and long-term late effects—and care solutions;

⁹⁴ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- National healthcare providers, policymakers and authorities in European regions, Member States and Associated Countries have the scientific evidence to accelerate the implementation of affordable and accessible treatment and care solutions in their healthcare systems;
- Researchers, innovators, and professionals from different disciplines and sectors ensure accessibility and re-usability of relevant trial data, to support the future UNCAN.eu research data platform, which is currently in preparation.

Scope: This topic will contribute to the achievement of the Mission's objective to provide better treatments for cancer. The focus is on children (0-14 years of age, e.g. age of first cancer diagnosis) and/or adolescent (15-19 years of age, e.g. age of first cancer diagnosis) cancer patients.

Paediatric oncology has made considerable progress, increasing patient survival rates up to 80%; yet cancer remains the leading cause of death in children and adolescents. Progress in R&I to support the development of targeted cancer treatments for children has been rather limited. Over the past 20 years, less than 10% of new anti-cancer drugs have received marketing authorization for paediatric use, resulting in limited availability of innovative therapies to treat paediatric cancers. This is even more striking when cancers with poor prognosis are considered.

Most of the treatments currently used for paediatric cancers have been developed to treat adult cancers; in addition, young cancer patients and survivors very often experience adverse late-effects⁹⁵ due to the high toxicity of treatments. Clinical tools used to evaluate treatment outcomes (e.g. tools to assess toxicity, radiological response, quality of life etc.), are also derived from adult oncology and therefore suboptimal;

This situation mostly reflects the fact that paediatric cancers are rare, and their biology is different to adult cancers. The relatively low number of cases warrants the implementation of multinational academic-initiated clinical trials to accelerate the development of innovative, more effective and less toxic treatments.

Proposals should address all of the following:

- Design and conduct innovative investigator-initiated multinational early-stage clinical trials, (phase 1 and 1/2) to accelerate the development of safe, effective, targeted cancer treatments⁹⁶ for children and/or adolescents with cancer. Focus should be on cancers with poor prognosis (e.g. with a 5-year overall survival less than 50% from time of diagnosis) at any stage of the disease and for any type. Trials should take into account

⁹⁵ Late-effects range from cardiovascular disease, organ and skin alterations, fertility problems, cognitive impairment, and mental health issues such as depression and anxiety etc. The 2024 Cancer Mission annual work programme includes a topic (HORIZON-MISS-2024-CANCER-01-05) to improve the understanding and management of late-effects in Adolescent and Young Adults, cancer patients and survivors

⁹⁶ Including but not limited to new and repurposed drugs, innovative radiation and immunotherapy approaches, advanced therapies, combination of treatments and/or with other interventions etc

socio-economic and biological stratification. All data should be disaggregated by sex, gender, age and other relevant variables;

- Develop innovative clinical tools (companion diagnostics) to assess tumour response, tailored to childhood and adolescent cancers, enabling an accurate evaluation of treatment outcomes, monitoring of long-term effects of treatment, and identification of potential risks such as second cancers, thereby improving overall patient care;
- Ultimately, provide scientific evidence to deliver affordable and accessible treatments for children and adolescents with cancer to be implemented by healthcare systems at the level of local communities, European regions, Member States and Associated Countries;
- All datasets produced should be described with metadata records in the EU dataset catalogue of the European Health Data Space, while all tools and models should take advantage of current European research infrastructures, should follow the principles of open science and made available through the future UNCAN.eu platform⁹⁷.

The topic is designed to fill a gap in terms of knowledge, expertise, tools, data and resources in paediatric oncology, to be achieved through multinational, cross-sectoral and multidisciplinary cooperation.

For that purpose, projects should bring together a diverse range of stakeholders and organizations from across Europe and beyond, including academia, data scientists, paediatric oncology centers, hospitals, healthcare practitioners, liquid biopsy companion diagnostics experts, cancer patients and survivors, caregivers, patients and survivors organisations, regulators, and industry etc., to foster collaboration and accelerate the development of innovative cancer treatments and therapeutic approaches including companion diagnostics. Timely contact with regulatory authorities should be foreseen to inform the trial design and feasibility. Use of artificial intelligence tools is encouraged, whenever relevant. Existing resources such as paediatric cancer registries should be appropriately exploited.

This topic requires the effective contribution of Social Science and Humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise in the successful proposal, to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Successful proposals are expected to build on the support of the Knowledge Centre on Cancer (KCC)⁹⁸ to foster EU alignment and coordination. Due consideration should be given to existing EU-funded initiatives (and if relevant other initiatives), including PedCRIN/ECRIN⁹⁹

⁹⁷ <https://healthdcap.github.io/>

⁹⁸ Hosted by the European Commission's Joint Research Centre (JRC). Especially through the 'European Guidelines and Quality Assurance Schemes for Breast, Colorectal and Cervical Cancer Screening and Diagnosis', and the 'European Cancer Information System (ECIS)' and the 'European Cancer Inequalities Registry (ECIR)', see https://knowledge4policy.ec.europa.eu/cancer_en

⁹⁹ [PedCRIN | Ecrin](#)

relevant initiatives supported by the Innovative Health Initiative, such as ITCC4¹⁰⁰, c4c¹⁰¹, EU PEARL¹⁰² or the European Reference Network for Paediatric Oncology, ERN PaedCan¹⁰³

The Commission will facilitate coordination. Proposals should include a budget for networking, attendance at meetings, and potential joint activities¹⁰⁴ and will be asked to join the 'Diagnosis and Treatment' cluster for the Cancer Mission¹⁰⁵

Applicants should provide details of the clinical studies in the dedicated annex using the template provided in the submission system.

HORIZON-MISS-2025-02-CANCER-05: Pragmatic clinical trials to enhance the quality of life of older cancer patients (65 years and older) through nutrition

Call: Supporting the implementation of the Cancer Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold is 12.</p>

Expected Outcome: Proposals under this topic should aim to deliver results that are directed and tailored towards, and to contribute to all of the following expected outcomes:

- Older cancer patients have access to and benefit from tailored nutritional care-oriented interventions as part of routine treatment or care interventions, which improves treatment

¹⁰⁰ [ITCC-P4 GmbH Paediatric Preclinical Proof of Concept Platform \(itccp4.com\)](https://itccp4.com)

¹⁰¹ [connect4children is a pan-European clinical trial network](https://connect4children.eu)

¹⁰² <https://eu-pearl.eu/>

¹⁰³ [Home - ERN PaedCan \(ern-net.eu\)](https://ern-net.eu)

¹⁰⁴ Examples of these activities are research or research capacity, organising joint workshops, establishing best practices, joint communication or citizen engagement activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate. Proposals are not required to include details of these activities, as they will be defined during the grant agreement preparation phase and during the life of the project.

¹⁰⁵ In order to address the objectives of the Cancer Mission, participants will collaborate in project clusters to leverage EU-funding, increase networking across sectors and disciplines, and establish a portfolio of Cancer Mission R&I and policy actions.

outcomes, alleviates disease symptoms and side effects and enhances their survival and quality of life;

- National healthcare providers, policymakers and authorities in European regions, Member States and Associated Countries have the evidence to implement tailored nutritional care as part of routine cancer treatment or care interventions in their healthcare systems, including in everyday medical practice.

Scope: Nutrition is of particular concern in older cancer patients due to issues like malabsorption, which is linked to adverse outcomes (such as mortality and decreased quality of life). Moreover, cancer incidence and mortality and prevalence predictions¹⁰⁶ suggest a considerable increase of older cancer patients, who are also underrepresented in clinical studies. Hence, older cancer patients across Europe would benefit from access to optimised nutritional care-oriented interventions, to improve treatment outcomes, alleviate disease symptoms and side effects¹⁰⁷, thereby enhancing their survival and quality of life.

Pragmatic clinical trials address treatment optimisation by evaluating treatment effectiveness, i.e. the effect of treatment in routine (real-world) clinical practice¹⁰⁸

Proposals should address all of the following:

- Conduct randomised or cluster-randomised academic investigator-initiated pragmatic clinical trials to validate tailored nutritional care-oriented interventions as part of routine cancer treatment or care, which could include physical activity or psychosocial support, **for older cancer patients (65 years and older)**;
- Translational research is limited to supporting the conduct and analyses of the proposed clinical trial(s). Trials should consider biological stratification of the patient population to be enrolled. All data should be disaggregated by sex, gender, age, and other relevant variables, such as by measures of socio-economic status or ethnicity;
- The chosen nutritional care-centred intervention(s) should be adapted to the needs of older cancer patients and to the specificities of the provision of care at local, regional, or national level, duly reflecting the (cultural) diversity across Member States and Associated Countries. Furthermore, affordability and accessibility should be considered;
- The primary and secondary endpoints of the pragmatic clinical trial(s) should support overall survival, patient-reported outcomes and quality of life issues. Such endpoints should be defined together with older patients and their caregivers through research that

¹⁰⁶ Globocan, ECIS

¹⁰⁷ For example: insufficient caloric intake; anorexia; cachexia, frailty, malfunctioning of the digestive tract such as difficulties with swallowing, indigestion, malabsorption, placement of a stoma, treatment-induced intolerance or allergy, inflammation, immune suppression, complications due to antimicrobial drug treatment and/or resistance, bowel dysfunction, changes to the oral, skin, lung, urethral, genital, gut, or other microbiota, fatigue, or, mental health issues.

¹⁰⁸ Examples include treatment versus active surveillance in patient management, a combination of treatment interventions, determination of optimal dose and dose schedules, de-escalation of treatment interventions, comparative effectiveness of different treatment interventions.

stimulates social innovation and supports end-user engagement using participative research models;

- Include an appropriate mix of stakeholders from various disciplines and sectors, such as physicians, academia, patients and their caregivers, patient representatives, dietitians, nutritionists, behavioural scientists, SMEs, insurance companies, charities and foundations, research organisations, civil society, regional and national health authorities;
- All datasets produced should be described with metadata records in the EU dataset catalogue of the European Health Data Space¹⁰⁹ while all tools and models should take advantage of current European research infrastructures, should follow the principles of open science and be made available through the future UNCAN.eu platform.

This topic requires the effective contribution of Social Sciences and Humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise in the successful proposal, to produce meaningful and significant effects enhancing the societal impact of the related research activities.

The Commission will facilitate coordination. Therefore, successful proposals will be asked to join the 'Quality of Life' cluster for the Cancer Mission, established in 2023, and should include a budget for networking, attendance at meetings, and joint activities¹¹⁰.

Applicants should provide details of the clinical studies in the dedicated annex using the template provided in the submission system.

HORIZON-MISS-2025-02-CANCER-06: Support to the network of National Cancer Mission Hubs (NCMHs)

Call: Supporting the implementation of the Cancer Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 11.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 11.00 million.
<i>Type of Action</i>	Coordination and Support Actions

¹⁰⁹ <https://healthdcap.github.io/>

¹¹⁰ Examples of those activities are research or research capacity, organising joint workshops, establishing best practices, joint communication or citizen engagement activities with projects funded under other clusters and pillars of Horizon Europe, or other EU programmes, as appropriate. Proposals are not required to include details of these activities, as they will be defined during the grant agreement preparation and during the life of the project.

<i>Award criteria</i>	The criteria are described in General Annex D. The following exceptions apply: The thresholds for each criterion will be 4 (Excellence), 4 (Impact) and 4 (Implementation). The cumulative threshold is 12.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹¹¹ .

Expected Outcome: This topic will ensure the continuation of the work of supporting the creation of a Network of National Cancer Mission Hubs (NCMHs) in Member States and Associated Countries. NCMHs in each Member State and Associate Country are to operate for the whole duration of the Cancer Mission and beyond. It was envisaged that there would be a second phase of support to build on the achievements and needs identified under the ECHoS project¹¹² during the first phase.

Proposals under this topic should aim to deliver results that are directed and tailored towards and contribute to all of the following expected outcomes:

- The Network and NCMHs are supported to ensure the integration of Cancer Mission activities at national, regional, and local levels;
- Stakeholders, including patients and citizens, in national, regional or local health and research and innovation systems engage in policy dialogues on cancer;
- Citizens, including patients, are involved in citizen engagement activities, including their design and development, which will lead to recommendations being made to governments, helping to implement and adapt strategies to national and regional needs;
- Regional and national policy makers and authorities benefit from activities carried out in the implementation of Cancer Mission actions.

Scope: Building on the first phase of NCMHs, the Mission's activities will be coordinated with relevant national, regional or local actors with a view to facilitate their integration and alignment with EU and national initiatives such as Europe's Beating Cancer Plan and national

¹¹¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹¹² [Establishing of Cancer Mission Hubs: Networks and Synergies | ECHoS | Project | Fact sheet | HORIZON | CORDIS | European Commission](#)

cancer strategies and/or national cancer control plans. The Network and NCMHs will be strengthened, including through expanding its capacities, outreach and type of activities the Network will carry out, while ensuring its sustainability.

In this regard the proposal should support the operation of the Network and activities carried out by it.

The proposal should address all of the following:

- Enhance the capacity of NCMHs in the Member States and Associated Countries, through knowledge exchange and training, and expanding the geographical outreach of the NCMHs activities in each country;
- Support the Networks' work such as coordination of joint activities of NCMHs and awareness raising of the Cancer Mission activities including coordination of EU cancer research activities and policy actions;
- Develop a methodology on mission-driven implementation of Mission actions with a view to building synergies at national and regional levels;
- Support the engagement of relevant national, regional or local actors, including civil society as well as business and legal advisors, including those who haven't been involved previously, in regular thematic policy dialogues and country-specific dialogues on cancer to increase the impact of EU cancer-related R&I and policies at national, regional and local level;
- Organise regular citizen engagement activities, at least one per year related to the objectives of the Mission, such as on prevention or screening and/or organise activities for a country or a number of countries using tools and materials developed by the European Observatory on Health Systems and Policies¹¹³ in each Member State and Associated Country, with a view to increase awareness and participation in policy discussions;
- Develop strategies for NCMHs to reach long-term sustainability and to create a level of interest from stakeholders including from philanthropy, to attract private funding beyond EU programmes in support of NCMHs;
- Disseminate the results of NCMHs Networks' activities, through organisation of a yearly conference and development of policy reports;
- Provide a yearly summary report of national Mission-related activities to contribute to the monitoring of progress of the Mission implementation at national and regional levels;
- Organise regular exchanges of best practices between the NCMHs and hubs of the other four missions, e.g. in the area of stakeholder and citizen engagement, long-term sustainability of mission hubs, and building of synergies;

¹¹³ [European Observatory on Health Systems and Policies \(who.int\)](https://www.euro.who.int/en/about-us/partners/european-observatory-on-health-systems-and-policies)

- Work closely with Horizon Europe National Contact Points to enhance their activities, such as raising awareness about Cancer Mission funding activities through information events (e.g. info-days, conferences, mutual-learning events, brokerage events, and fairs) and communication tools. Collaborate closely with Cancer Mission Board members to engage new stakeholders, and to mobilise and align additional funding in support of NCMHs;
- Work closely with relevant international institutions and initiatives addressing science-policy interaction relevant to the Cancer Mission, including relevant OECD initiatives aiming at strengthening evidence-informed policy making for mission-oriented innovation (e.g. contributing to the Community of Practice through mutual learning, workshops and networking initiatives);
- Establish appropriate collaboration with the consortium implementing HORIZON-MISS-2024-CANCER-01-06 for joint activities¹¹⁴ such as dissemination and outreach related to the national nodes of the European Cancer Patient Digital Centre (ECPDC)¹¹⁵.

This action supports the follow-up to the July 2023 Communication on EU Missions assessment¹¹⁶.

Cancer: Other Actions

1. Continuation of bus roadshow with focus on cancer prevention

Community-based initiatives, such as the pilot EU Cancer Mission Bus Roadshow, currently implemented in Lithuania, Poland and Romania, have shown effectiveness in increasing awareness and initiating behavioural changes towards cancer prevention.

This procurement action will support a further implementation of the initiative, in other EU countries.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 3.00 million from the 2025 budget

2. Develop a monitoring system for all Mission objectives – technical assistance

This action will support the continuous monitoring of the Mission and logistical support to meetings of expert groups and events with stakeholders, including Mission project clusters

¹¹⁴ Examples of those activities are the hosting of national web pages of the ECPDC information portal, engagement with users, assessment of their experiences and provision of feedback to the ECPDC steering board, etc.

¹¹⁵ European Commission, Directorate-General for Research and Innovation, *An operational concept for a European Cancer Patient Digital Centre – EU missions – Cancer*, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2777/78242>

¹¹⁶ eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023DC0457

and international partners and other actions launched under the EU Cancer Mission funded under Horizon Europe.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 0.84 million from the 2025 budget

DRAFT

Supporting the implementation of the Restore our Ocean and Waters Mission

The Mission ‘Restore our ocean and waters by 2030’ will provide a systemic approach to restore, protect and preserve the health of our ocean, seas and waters. The Mission is designed to deliver on the European Union’s 2030 quantified and measurable targets for protecting and restoring ecosystems and biodiversity, for achieving zero pollution, and for decarbonising and reducing net greenhouse gas emissions from the blue economy towards climate-neutrality, within the EU’s seas and waters. The Mission will support many Sustainable Development Goals (SDGs): in particular restoring our ocean and waters related actions will directly contribute to SDG 14 - Life below water and SDG 6 - Clean water and sanitation, as well as to SDG13 - Climate action.

The Mission will also contribute to the UN Decade of Ocean Science for Sustainable Development¹¹⁷ by fostering research and cooperation across European sea basins, including the EU Outermost Regions and beyond, and mobilise scientists, as well as citizens for a sustainable and healthy ocean, seas and waters.

The implementation plan specifies the goal and objectives as well as implementation details of the Mission “Restore our Ocean and waters by 2030”¹¹⁸.

The Mission Work Programme, under Horizon Europe, will contribute to the recovery of our ocean and waters by 2030 and more specifically to the following objectives:

1. Protect and restore marine and freshwater ecosystems and biodiversity, in line with the EU Biodiversity Strategy 2030¹¹⁹ and the Nature Restoration Law¹²⁰;
2. Prevent and eliminate pollution of our ocean, seas and waters, in line with the EU Action Plan Towards Zero Pollution for Air, Water and Soil¹²¹;
3. Make the sustainable blue economy carbon-neutral and circular, in line with the European Climate Law¹²² and the holistic vision enshrined in the Communication on a new approach for a Sustainable Blue Economy¹²³.

The Mission is implemented in two phases:

- In the first ‘development and piloting’ phase (2022-2025), research and innovation activities lay the foundations for implementing the three Mission objectives and enabling actions, paving the way to further citizens participation and engagement.

¹¹⁷ <https://www.oceandecade.org/>

¹¹⁸ https://ec.europa.eu/info/sites/default/files/research_and_innovation/funding/documents/ocean_and_waters_implementation_plan_for_publication.pdf

¹¹⁹ COM/2020/380 final

¹²⁰ Regulation (EU) 2024/1991 of the European Parliament and of the Council of 24 June 2024 on nature restoration and amending Regulation (EU) 2022/869 (Text with EEA relevance), OJ L, 2024/1991

¹²¹ COM/2021/400 final

¹²² Regulation(EU)2021/1119

¹²³ COM/2021/240 final

- In the second ‘deployment and upscaling’ phase (2026-2030), the solutions will be further deployed, replicated and scaled up. Activities aim at supporting transformative and innovative solutions to be demonstrated in view of their deployment. Enabling activities will continue generating new knowledge, observation and monitoring data.

To foster synergies between R&I funding instruments (European and national), align R&I investments, ensure access to excellence and translate research results for the benefit of the society and the economy, applicants should consider and actively seek complementarities with, and where appropriate possibilities for further funding from other R&I-relevant EU, national or regional programmes for a sustainable blue economy, notably EMFF/EMFAF, LIFE, ERDF, ESF+, JTF, CEF Inland Waterways or Maritime and InvestEU, as well as private funds or financial instruments. All actions of the Mission are expected to share and disseminate their results according to FAIR (findable, accessible, interoperable, reusable) principles compatible with ongoing EU initiatives such as the European Marine Observation and Data Network (EMODnet) and the European Open Science Cloud (EOSC). In line with this approach, specific actions within the Mission will be devoted to widening access to data and knowledge of ocean, seas and freshwater through the Digital Twin Ocean ¹²⁴ (a key deliverable of the Mission Ocean and waters digital knowledge system).

All proposals submitted to the topics listed below are expected to show how their proposed activities and results will achieve the Mission’s objectives, in line with the timeframe of the Mission phases, i.e.: by 2025 for the ‘development and piloting’ phase and 2030 for the ‘deployment and upscaling phase’.

The 2025 work programme is structured around the following activities:

- Evidence-based approaches and solutions to support the establishment of Marine Protected Areas (**Blue Parks**);
- A toolbox for public authorities to address plastic litter by implementing **land-to-river-to-sea** approaches;
- Uptake of innovative solutions to support the digital **transition in fisheries and aquaculture** and improve energy efficiency;
- Place-based and people-centred **restoration** (in the sense of the Mission, i.e. contributing to the three objectives of the Mission) of a number of **regions** and their coastal and riparian zones, **waterfront cities and islands**;
- Consolidation of the core infrastructure of the **European Digital Twin Ocean (DTO)** and integration of additional models;
- Consolidation of **national and regional hubs** mobilizing national and regional funds as well as private financing, to support the replication of innovative solutions.

¹²⁴ https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/restore-our-ocean-and-waters/european-digital-twin-ocean-european-dto_en

Activities to support communities to achieve the objectives of the Mission Ocean and Waters, to develop an Ocean Observation Platform, to improve accounting of blue carbon within the wetlands and to support a conference under the Danish Presidency are also covered.

Proposals are invited against the following topic(s):

HORIZON-MISS-2025-03-OCEAN-01: Blue Parks - Towards a coherent European network of strictly protected areas for restoring healthy and productive marine ecosystems

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 and 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Improved knowledge on the distribution and condition of marine habitats, as well as on key ecosystem services provided by these habitats;
- Support to, and acceleration of the designation by Member States/Associated Countries of new strictly protected areas, contributing to the EU Biodiversity Strategy and the UN Convention on Biological Diversity;
- Measurable contributions to achieving the Mission ocean and waters' Objective 1 on the Protection and restoration of marine ecosystems and biodiversity.

Scope: The EU Biodiversity Strategy for 2030 sets a target to legally protect at least 30% of EU seas and to strictly protect 10% of EU seas by 2030. Member States have supported this target and have started the scientific and technical work to identify new areas to be (strictly) protected. Strictly protected areas are also expected to play a role in the implementation of obligations to restore habitats listed in the Regulation on Nature Restoration (habitat types in Annex II¹²⁵ and habitats of species covered by the regulation) through passive restoration. There are however many data gaps concerning the distribution and condition of habitats and potential different strategies in Member States to find suitable areas for strict protection that may hinder the creation of a truly coherent EU network of strictly protected areas. There is a need for science-based conservation planning at a sea basin or sub-basin scale which would

¹²⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32024R1991&qid=1722240349976>

also take into account potential trade-offs due to the main uses of the sea as well as maximise benefits for climate and fisheries. While there are ongoing projects that should support the planning of future EU Marine Protected Areas (MPAs) networks, none of them is currently focusing on the specific target of strictly protected areas and delivering benefits for climate and fisheries, as well as explicitly addressing potential spatial trade-offs with offshore renewables and other activities.

This topic addresses Mission ocean and waters' Objective 1 on the protection and restoration of marine ecosystems and biodiversity, in line with the aims of the Biodiversity Strategy¹²⁶ as well as on the objectives of the Regulation on Nature Restoration¹²⁷. They should also contribute to the aims of the Marine Action Plan¹²⁸ and to the implementation of the Birds, Habitats[[Council Directive 92/43/EEC; Directive 2009/147/EC]] and Marine Strategy Framework¹²⁹ Directives, as well as the common fisheries policy and climate policy and legislation.

Proposals should focus on prioritising areas for strict protection in European seas by providing a scientific basis for Member States/Associated Countries to designate new strictly protected areas, whilst delivering benefits for fisheries and climate.

Projects should identify potential areas and coherent networks of strictly protected areas covering in particular the habitat types listed in Annex II of the Regulation on nature restoration and habitats of species covered by the regulation, prioritising those habitats which are spawning, nursery and feeding areas for fish populations and species protected by the nature legislation, capturing and storing carbon as well as enhancing coastal protection. Projects should also include mapping and assessing conditions of these habitats, contributing to the implementation of Article 5 of the Regulation and providing data to EMODnet and the Digital Twin Ocean

Projects should promote trans-boundary joint actions, as national borders are most often inaccurate for reflecting natural boundaries (resource stocks, fluxes of organisms, habitats distribution). The project should also promote inter-disciplinary research (including legal sciences, economy, ecology etc.) and inter-sectorial, transdisciplinary approaches (practitioners, decision makers, scientists).

Compatibility of optimal network(s) of strictly protected areas as well as potential trade-offs with marine/maritime activities, (e.g.: fisheries, offshore wind energy and maritime transport), should be addressed.

All following activities should be covered:

- Review and compile data about the distribution and condition of habitat types listed in Annex II of Regulation on nature restoration, including by compiling data currently not available from public repositories, and collecting new data where necessary.

¹²⁶ COM(2020) 380 final

¹²⁷ REGULATION (EU) 2024/1991

¹²⁸ COM/2023/102

¹²⁹ Directive 2008/56/EC

- Review and compile data, collecting new data where necessary, about spawning, nursery and feeding areas of fish species and species protected by nature legislation, as well as areas with habitats which play a key role in carbon capture and storage and for coastal protection, including by compiling data currently not available from public repositories.
- Based on the ecological needs of those habitats and their typical species (including for example connectivity of habitats or life cycles of species), determine optimal network(s) of strictly protected areas, contributing to the 10% target of the Biodiversity Strategy, that would best support the protection of habitats and the delivery of significant benefits for fisheries and climate, for example through spill-over effects or by ensuring undisturbed capture and storage of carbon and coastal resilience and preventive measures for protection.
- Address the compatibility with and potential trade-offs in relation to planned marine/maritime activities, (e.g.: fisheries, offshore wind energy, coastal development and maritime transport) that may overlap with the identified optimal network(s) of strictly protected areas. Relevant Marine Spatial Planning plans should be taken into account.

The project(s) is/are expected to deliver a blueprint for the establishment of optimal network(s) of marine strict protected areas, whose scale and range should be ecologically relevant and impactful. Close cooperation with the relevant public authorities and stakeholders is encouraged.

The project(s) should build on existing knowledge and projects funded by the EU and national programmes, which are relevant for MPAs and maritime spatial planning, including data collected by the Joint Research Centre and the European Environment Agency, as well as on projects supported by the European Union Framework programmes for Research and Innovation (such as Horizon 2020 and Horizon Europe), EMFAF, LIFE and Interreg programmes, the Partnership Biodiversa+ and JPI Oceans. Project(s) should support Member States' cooperation on the establishment of coherent networks of strictly protected areas.

Projects should cooperate closely with projects funded under Mission ocean and waters topics HORIZON-MISS-2021-OCEAN-02-01, HORIZON-MISS-2022-OCEAN-01-01, and HORIZON-MISS-2023-OCEAN-01-01 and avoid overlaps with regard to the geographical coverage of the projects already funded. Projects should build links with the Mission Implementation Platform and with the Blue Parks community.

Proposals addressing the EU Outermost Regions¹³⁰ are encouraged, given these regions' natural assets.

¹³⁰

https://ec.europa.eu/regional_policy/policy/themes/outermost-regions_en

HORIZON-MISS-2025-03-OCEAN-02: A toolbox for public authorities to address marine plastics and litter from river-to-ocean

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.50 and 5.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 22.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering the 4 different Mission basins¹³¹ (1. Atlantic and Arctic sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin, 4. Danube River basin, including Black Sea), grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each sea basin, provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: if projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on the FAIR (Findable, Accessible, Interoperable, Reusable) principles.</p>

¹³¹ For the purposes of Mission Ocean and waters, Member States/Associated Countries, are considered to be part of a given sea/river basin if they have a coast/riverbank on the relevant sea/river or contain river basins flowing into the relevant sea.

	Beneficiaries may provide financial support to third parties. The support to Third Parties can only be provided in the form of grants. The Financial Support to Third Parties may only be awarded to local and/or regional authorities/public bodies located in Member States/Associated Countries. The maximum amount to be granted to each Third Party is EUR 100,000, aiming at showcasing the effectiveness of the toolbox and develop a replication plan for its uptake in an ‘associated region’ ¹³² . The Financial Support to a Third Party is provided only once for the entire duration of the project.
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Public authorities and relevant stakeholders have access to a toolbox to address marine plastic litter from land-to-river-to-ocean;
- Reduced plastic litter pollution in European rivers and seas according to a land-to-river-to-sea approach at basin level;
- Accelerated uptake of innovative solutions to prevent and remove litter, including plastic pollution reaching the sea in the Mission basins;
- Enhanced knowledge on marine litter, including plastics in line with the new guidelines for a common approach to tackle marine litter of the Marine Strategy Framework Directive (MSFD) Technical Group on Marine Litter;
- Measurable contributions to achieve the Mission ocean and waters and the EU Zero Pollution targets to reduce by at least 50% plastic in the sea;
- Contribution to the Mission’s Digital ocean and water Knowledge system through marine observations and open data and knowledge sharing.

Scope: Understanding and tackling the inland sources, pathways, distribution and cumulative impacts of marine litter and plastic pollution into the ocean is fundamental to reduce the overall anthropogenic impact on our ecosystems and to guide the process towards the Mission’s 50% plastic litter reduction target in European water systems.

The overall aim of the activities under this topic is to co-design with relevant public authorities and public service providers, as well as other interested parties the most appropriate tools and solutions to address marine litter and plastic pollution according to a land-to-river-to-sea approach at basin level.

The main deliverable of funded projects under this topic will be a toolbox providing evidence-based data and information on sources, pathways, distribution and cumulative impacts of marine litter on ecosystems and water quality, including plastics and information on related

¹³² Regional or local authorities established as public bodies by national law and governed by public law

hotspots and areas of accumulation, together with a set of demonstrated, sustainable and environmentally sound removal solutions, as well as measures to prevent litter and plastics reaching the sea.

Work should focus on inland waters (including deltas and coastal areas), where, in the absence of systematic monitoring of plastic litter, data and standardised methodological tools and techniques for collection, identification, classification and quantification of plastic pollution are most urgently needed. Activities are also expected to enhance cross-border cooperation and coordination at different levels, national, regional, local.

All following components are expected to be embedded in the toolbox:

- Marine litter monitoring and data collection to detect, identify and characterise major sources and pathways, hotspots and areas of accumulation of riverine litter, as well as cost-effective quantification of litter presence and fluxes, both above and below water. Relevant data collected through these actions should follow the [New guidelines for a common approach to tackle marine litter](#) of the MSFD Technical Group on Marine Litter and be made openly available through the European Marine Observation and Data Network (EMODnet);
- A set of suitable and cost-effective innovative solutions for the sustainable and environmentally sound removal of plastics litter in rivers and inland waters, leading to reduction of litter in sea basins, without harming living organisms;
- Measures to engage with society and relevant industrial sectors, including the fishing industry, to prevent plastic litter reaching the sea (e.g.: good practices; awareness raising campaigns, community-led actions, education schemes, audio-visual campaigns, proper waste management) and to support the uptake of innovative solutions, thus driving environmental improvements and transformative changes.

Each proposal should identify explicitly the basin being addressed, i.e.: 1. Atlantic and Arctic sea basin or 2. Mediterranean Sea basin or 3. Baltic and North Sea basin or 4. Danube River basin, including Black Sea. Only one basin per proposal should be addressed. Activities should be tailored to address regional/sea basin specificities.

The effectiveness and efficiency of the toolbox should be demonstrated through at least 3 use-cases in three different countries per basin, in the most relevant identified sites, such as river deltas, important source-sites of litter or other strategic points for litter removal and with the involvement of different users (e.g.: regional authorities, municipalities, entities managing waterbodies) .

To address the impact-driven approach of the Mission and the nature of Innovation Actions, projects are expected to work with and engage at least 3 ‘associated regions’ to showcase the effectiveness of the toolbox and develop a replication plan for its uptake in the associated regions. For this reason, beneficiaries may provide Financial Support to Third Parties (see the Specific Conditions table for this topic) to implement the 'Associated regions' scheme. An ‘Associated region is represented by local/regional authorities/public bodies. The aim of the Associated Region scheme is to support the replication of innovative solutions and/or to build

capacity at local level in order to address plastic litter according to a land-to-river-to-sea approach. The projects should ensure that the 'Associated regions' are not already involved in the use cases covered by the projects. The partners should proactively reach out to the 'associated regions' to enable them to follow closely the project and its activities. The projects should continuously share their outcomes and knowledge with those 'associated regions' and provide them with technical assistance to build capacity and to implement in their territory the approach they developed. Proposals must outline the selection process of the third parties to which financial support would be granted in accordance with the specific conditions of this topic, the requirements of the Financial Support to Third Parties application template and part B of the General Annexes to this work programme. The involvement of 'Associated regions' through the Financial Support to Third Parties, as described above, is a key element of the proposed action.

Should the actions include the development of digital tools, to support the monitoring, data collection, forecasting and decision-making regarding marine litter at local level, interoperability with the work done in the EU Digital Twin of the Ocean and storage in the digital platform are required, as a means of continuity, creating synergies and exchanges and ensuring legacy.

The projects selected under this topic are expected to cooperate and exchange among themselves as well as with relevant projects arising from previous topics implemented under Mission ocean and waters (e.g.: HORIZON-MISS-2022-OCEAN-01-04), the Plastic Pirates project, with the WATER4ALL partnership, relevant Interreg projects as well as projects that will be funded under the topic HORIZON-CL6-2025-01-ZEROPOLLUTION-05: Towards a comprehensive European strategy to assess and monitor aquatic litter including plastic and microplastic pollution and HORIZON-CL4-SPACE-2025-01-46: Innovative Earth observation services in support of maritime litter detection and ship source pollution policies. Proposals are encouraged to consider, where relevant, the services offered by European research infrastructures¹³³.

Cooperation with the EU Outermost Regions¹³⁴ is encouraged, given these regions' natural assets.

HORIZON-MISS-2025-03-OCEAN-03: Digital technologies and energy transition in fisheries and/or aquaculture

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
<i>Expected EU contribution per</i>	The Commission estimates that an EU contribution of between EUR 5.00 and 5.825 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and

¹³³ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website - <https://ri-portfolio.esfri.eu>

¹³⁴ https://ec.europa.eu/regional_policy/policy/themes/outermost-regions_en

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<i>project</i>	selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 23.30 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The following additional eligibility criteria apply: In addition to the standard eligibility conditions, the consortium must carry out demonstration activities in 3 different countries of the basin addressed by the proposal (i.e. one of the following basins: 1. Atlantic and Arctic sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin, 4. Danube River basin, including Black Sea), involving and including as beneficiaries, legal entities established in these respective countries¹³⁵</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering the 4 different Mission basins¹³⁶ (1. Atlantic and Arctic sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin, 4. Danube River basin, including Black Sea), grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each sea basin, provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: if projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on the FAIR (Findable, Accessible, Interoperable,</p>

¹³⁵ For the purposes of Mission Ocean and waters, Member States/Associated Countries, are considered to be part of a given sea/river basin if they have a coast/riverbank on the relevant sea/river or contain river basins flowing into the relevant sea.

¹³⁶ For the purposes of Mission Ocean and waters, Member States/Associated Countries, are considered to be part of a given sea/river basin if they have a coast/riverbank on the relevant sea/river or contain river basins flowing into the relevant sea.

	Reusable) principles.
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Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Energy efficiency is enhanced and CO₂ emissions are reduced in fisheries and/or aquaculture, without harming the ecosystem and biodiversity;
- Measurable reduction in energy use and the costs associated with energy-intensive operations in the fisheries and aquaculture sector, increasing resilience and leading to improved economic sustainability and operational safety;
- Wider adoption and application of digital solutions, including artificial intelligence and data analytics, for efficient energy management and decision-making in the fisheries and aquaculture industries;
- Improved understanding of technical, social, legal, regulatory and policy barriers to the uptake of digital solutions for a sustainable energy transition of the sector;
- Establishment of best practices for enhanced fisheries and/or aquaculture management and contribution to the development of standard;
- Enhanced digital and energy efficiency related skills.

Scope: The fisheries and aquaculture sectors, including algae, are critical components of the global food system, contributing significantly to food supply, food security and sustainable economic growth. Energy, specifically fuel consumption, is one of the major cost items in the European fisheries and aquaculture sector, putting the economic viability of the European fleet and aquaculture activities under tremendous pressure during periods of high energy prices. Moreover, this fuel usage contributes to CO₂ and other emissions, including underwater noise. Innovative solutions are needed to transform the energy landscape of the fisheries and aquaculture, making these critical industries more sustainable, resilient, and economically viable.

Projects under this topic will demonstrate how digital technologies can address the need to reduce energy consumption and associated economic and environmental costs in European fisheries and/or aquaculture and provide real-time, accurate, and actionable data and information to reduce energy use. This can include the use of advanced (remote) sensing technologies and monitoring devices, Internet of Things, artificial intelligence, data-driven approaches and data analytics, robotics and automation.

Each proposal should identify explicitly the basin being addressed, i.e.: 1. Atlantic and Arctic sea basin or 2. Mediterranean Sea basin or 3. Baltic and North Sea basin or 4. Danube River basin (including its delta and the Black Sea). Only one basin per proposal should be addressed. Activities should be tailored to address regional/sea basin specificities.

Projects should carry out demonstration activities, proving in real conditions, the operational feasibility and economic viability of digital solutions to enhance energy efficiency in operation at sea (including fishing, farming, offshore aquaculture, onboard processing, vessel operations) or inland aquaculture production and in relation to infrastructure requirements. Projects should provide evidence that these solutions do not harm ecosystems and biodiversity and can contribute to a better treatment of animals.

The consortium must carry out demonstration activities in at least 3 different countries of the basin addressed by the proposal (i.e. one of the following basins: 1. Atlantic and Arctic sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin, 4. Danube River basin, including Black Sea, involving and including as beneficiaries, legal entities established in these respective countries.)¹³⁷

Demonstration activities are expected to focus on relevant segments of the value chain and address different types of fisheries/aquacultures. Similarly, fishing operations, encompassing activities from route optimisation to catch handling, also present significant opportunities for energy efficiency improvements.

The implementation of the demonstration activities should also include an analysis of the obstacles and opportunities for the uptake of the solutions (technical, social, legal, regulatory and policy, including those linked to skills, the labour market and the attractiveness of the sector for young talents). Safety and well-being of workers as well as digital security related issues should also be considered.

This topic requires an integrated, holistic and transdisciplinary approach. Proposals should therefore ensure the involvement of relevant stakeholders with complementary expertise, including SMEs and of other relevant maritime sectors. The active involvement of end-users (fishers, aquaculture operators, sea-farmers) in the demonstration activities will be crucial to tailor the solutions to specific needs and conditions.

Dedicated training and user-centric activities taking place in the demonstration sites are expected to be included, to build capacity and support skill development and a workforce adapted to a sustainable energy transition.

Specific actions should be included to support the replication potential of the solutions, accelerate the uptake by other potential users of the solutions demonstrated in the project. Roadmaps for the uptake of digital solutions to support the energy transition in fisheries and/or aquaculture are also expected.

Projects should consider the provision of advisory support to the end-users to enhance energy monitoring and energy management to facilitate informed decision-making to reduce energy use, lower costs, and mitigate environmental impacts or to support the shift to renewable energy.

¹³⁷ For the purposes of Mission Ocean and waters, Member States/Associated Countries, are considered to be part of a given sea/river basin if they have a coast/riverbank on the relevant sea/river or contain river basins flowing into the relevant sea.

The projects are expected to cooperate and exchange with relevant projects implemented under the Sustainable Blue Economy Partnership¹³⁸, the Zero Emission Waterborne Transport Partnership¹³⁹, as well as projects funded under the topic HORIZON-MISS-2023-OCEAN-01-05: Lighthouse in the Baltic and the North Sea basins - Lighthouse in the Baltic and the North Sea basins - Green and energy-efficient small-scale fishing fleets. Proposals are encouraged to consider, where relevant, the services offered by European research infrastructures as well as related projects such as AQUASERV¹⁴⁰.

HORIZON-MISS-2025-03-OCEAN-04: Restoring Ocean and Waters in Regions

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 15.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Other conditions</i>	The proposed actions should implement their activities in at least [8] different regions, aiming for an equal distribution across the four lighthouses ¹⁴¹ , as defined in the Mission Implementation Plan: 1. Atlantic and Arctic Sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin, 4. Danube River basin, including Black Sea. Regions are defined according to Eurostat Nomenclatures, NUTS levels 2.
<i>Evaluation</i>	The evaluation committee might be composed partially by representatives

¹³⁸ <https://www.bluepartnership.eu/>

¹³⁹ <https://www.waterborne.eu/projects>

¹⁴⁰ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>; AQUASERV – research infrastructure services for sustainable aquaculture, fisheries and the blue economy <https://cordis.europa.eu/project/id/101131121>

¹⁴¹ For the purposes of the Mission Ocean and Waters, Member States/Associated Countries, are considered to be part of a given sea/river basin if they have a coast/riverbank on the relevant sea/river or contain river basins flowing into the relevant sea.

<i>Procedure</i>	of EU institutions
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Expected Outcome: This topic aims at directly engaging and supporting regional authorities in demonstrating and accelerating the transitions needed for achieving one or several objectives of the Mission Restore our Ocean and Waters in their coastal and riparian areas. The participation of regional authorities¹⁴² as full partners of the consortium is strongly encouraged.

Projects should work with regional authorities and other relevant competent authorities (e.g. authorities responsible for river, water and coastal management) in carrying out restoration activities in coastal zones¹⁴³ and riparian zones¹⁴⁴ on land, in the land-sea continuum as well as in their surface waters (rivers, lakes, transitional and coastal waters), which will contribute to achieving the Mission objectives.

Project results are expected to contribute to all the following expected outcomes:

- Measurable, quantifiable, verifiable and ambitious progress towards reaching one or several interlinked objectives and targets of the Mission “Restore our Ocean and Waters by 2030”, as set out in the Mission Implementation Plan¹⁴⁵ through implementation of effective and well-managed place-based and people-centred actions.
- Involvement and increased readiness of regional and other competent authorities for testing, deploying and upscaling systemic innovative solutions for restoring their coastal and riparian areas, incl. by strengthening synergies with their own programmes and resources.
- Increased number of regional authorities and other competent authorities taking concrete measures to protect and restore marine and freshwater ecosystems and biodiversity, prevent and eliminate pollution of our ocean, seas and waters, and make the blue economy carbon-neutral and circular, supporting programmes of measures of relevant EU legislation.
- Increased resilience of coastal and riparian communities to extreme climate events and sea-level rise.
- Public and private investment is encouraged and leveraged at regional level to protect and restore degraded ecosystems, to prevent and eliminate pollution, and make the blue economy carbon-neutral and circular.

¹⁴² In the context of this topic, regional authorities refer to legal entities responsible for managing regions, geographical areas at sub-national level, defined as NUTS 2 and 3, corresponding to actual administrative units with their own representation/government. For more information about NUTS (Nomenclature of territorial units for statistics).

¹⁴³ <https://land.copernicus.eu/en/products/coastal-zones>

¹⁴⁴ <https://land.copernicus.eu/en/products/riparian-zones>

¹⁴⁵ See section 1.2. of the Mission Ocean and Waters Implementation Plan: https://research-and-innovation.ec.europa.eu/system/files/2021-09/ocean_and_waters_implementation_plan_for_publication.pdf

Scope: The project should test and demonstrate effective solutions to achieve the Mission's specific objectives and targets in coastal and riparian areas. The project should thus test and demonstrate solutions that contribute to:

1. protecting and restoring marine and freshwater ecosystems and biodiversity, in line with the EU Biodiversity Strategy 2030 and Nature Restoration Regulation, and/or
2. preventing and eliminating pollution of our ocean, seas and waters, in line with the EU Action Plan Towards Zero Pollution for Air, Water and Soil and/or
3. making the sustainable blue economy carbon-neutral and circular, in line with the European Climate Law and the holistic vision enshrined in the Sustainable Blue Economy Strategy.

Demonstration activities are expected to take place in at least [8] regions with at least [2] in each of the four sea and river basins 1. Atlantic and Arctic Sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin, 4. Danube River basin, including Black Sea, with strong and meaningful involvement of relevant authorities.

Projects under this topic would be place-based and people-centred, with their activities implementing a systemic transition across all Mission objectives and enablers, in all lighthouses. Special emphasis should be placed on nature-based solutions, land-sea interactions, and transboundary actions. The projects should support the blue economy by integrating sustainable and environmentally friendly methods that are both ecologically and economically beneficial. Resilience of coastal and riparian communities to climate related extreme events, sea-level rise and water resilience aspects should also be addressed.

The project should:

- Assess the economic, social and ecological impacts as well as the societal acceptance of the proposed measures to achieve the Mission objectives and targets in coastal regions and riparian areas;
- Identify, test and adapt innovative solutions to restore coastal and riparian areas, making a tangible and measurable contribution to one or several of the specific Mission objectives and targets;
- Encourage citizen and stakeholder involvement and uptake through active participation in the restoration initiatives of coastal regions and riparian zones (e.g. through living labs), and through the follow-up of the restoration process with citizen science initiatives;
- Develop new innovative funding approaches to implement innovative solutions for the restoration of the ocean and waters;
- Monitor with measurable parameters the effectiveness of the proposed solutions in relation to the Mission objectives and targets;

- Facilitate synergies with other R&I-relevant EU, national or regional programmes and leverage of funds through interactions with regional/local authorities and the private sector where relevant.

For the successful implementation of the solutions and to ensure their sustainability beyond the duration of the project, the testing and demonstration of the proposed solutions should support the implementation of River Basin Management Plans under the Water Framework Directive, the Programme of Measures under the Marine Strategy Framework Directive, future national Nature Restoration Plans under the Nature Restoration Regulation, as well as, wherever already in place, existing mechanisms such as *coastal restoration contracts*¹⁴⁶, *river contracts*¹⁴⁷ or *Integrated Coastal Zone Management (ICZM)*, etc. Proposed solutions should be based on good knowledge about coastal and riparian ecosystems to be restored. If necessary, projects may include mapping and assessment of condition of related habitats and species.

Under the Mission approach, collaborations between regional authorities and other competent authorities facing similar challenges are highly encouraged and considered as a means to secure a larger impact. To facilitate replication of the solutions, the proposals should already identify other suitable regions/local areas, where the solutions and approaches could be replicated. Projects should also systematically assess the potential barriers to their implementation and how these can be overcome. This would help enhancing the transferability of the knowledge and experiences to other regions.

Regional and other competent authorities participating in the project are encouraged to pool and enhance synergies¹⁴⁸ with other sources of funding (e.g. structural, cohesion funds such as ERDF, or LIFE) for implementing and deploying innovative solutions, through e.g., the conclusion of a Cooperation Working Arrangement¹⁴⁹. This will support a common approach towards coastal and river restoration, and sustain the implementation of solutions, transfer knowledge and innovative solutions, and identify opportunities to scale up the solutions demonstrated and to foster their broad deployment across Europe.

The project should build (when relevant) on previously developed or existing solutions by other projects, funded by EU and national programmes, in particular the European Union Framework programmes for Research and Innovation (such as Horizon 2020 and Horizon Europe under their different pillars and clusters), as well as EMFAF, INTERREG and LIFE programmes. Proposals should also establish links with “HORIZON-MISS-2024-OCEAN-02-01: Community-led actions to restore our ocean, seas and waters” and “HORIZON-MISS-2024-OCEAN-02-02: Support for the Coalition of waterfront cities, regions and islands for

¹⁴⁶ Cf HE2020 RESTCOAST project

¹⁴⁷ Cf example <http://environnement.wallonie.be/contrat%5Ffriviere/>

¹⁴⁸ C(2022) 4747 final

¹⁴⁹ https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/eu-mission-ocean-and-waters-signs-first-cooperation-working-arrangement-eu-region-2024-12-17_en

Mission Ocean and Waters” are encouraged to consider, where relevant, the services offered by European research infrastructures¹⁵⁰.

The funded project should share experiences and good practices with the projects selected under the topics of the EU Mission Climate Change Adaptation “Supporting regions and local authorities in assessing climate risks” (HORIZON-MISS-2025-01-CLIMA-01) and “Support to regions and local authorities in developing local Action Plans towards climate resilience” (HORIZON-MISS-2025-01-CLIMA-02).

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Lighthouse CSAs and the Mission Implementation Platform, notably to contribute to tracking progress towards the objectives of the Mission.

HORIZON-MISS-2025-03-OCEAN-05: Restoring Ocean and Waters in waterfront Cities and their Ports

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 15.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Other conditions</i>	The proposed actions should implement their activities in at least [8] waterfront cities and ports, aiming for an equal distribution across the four lighthouses ¹⁵¹ as defined in the Mission Implementation Plan: 1. Atlantic and Arctic Sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin, 4. Danube River basin, including Black Sea.

¹⁵⁰ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

¹⁵¹ For the purposes of Mission Ocean and Waters, Member States/Associated Countries, are considered to be part of a given sea/river basin if they have a coast/riverbank on the relevant sea/river or contain river basins flowing into the relevant sea.

<i>Evaluation Procedure</i>	The evaluation committee might be composed partially by representatives of EU institutions
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Expected Outcome: This topic aims at directly engaging and supporting waterfront cities¹⁵² and their ports in demonstrating and accelerating the transitions needed for achieving one or several objectives of the Mission “Restore our Ocean and Waters”. The participation of relevant public bodies managing waterfront cities and port authorities as full partners of the consortium is strongly encouraged.

The project should work with public bodies managing waterfront cities, and port authorities in carrying out activities which will contribute to achieving the Mission objectives in the coastal zones¹⁵³ and riparian zones¹⁵⁴ of any city as well as in their surface waters (rivers, lakes, transitional and coastal waters). This covers both coastal and inland cities.

Project results are expected to contribute to all of the following expected outcomes:

- Measurable, quantifiable, verifiable and ambitious progress towards reaching one or several interlinked objectives and targets of the Mission “Restore our Ocean and Waters by 2030”, as set out in the Mission Implementation Plan¹⁵⁵ through implementation of effective and well-managed place-based and people-centred actions.
- Involvement and increased readiness cities and port authorities for testing, deploying and upscaling systemic innovative solutions for restoring their urban waterfront ecosystems and preventing their degradation, incl. by strengthening synergies with their own programmes and resources.
- Increased number cities and port authorities taking concrete measures to protect and restore marine and freshwater ecosystems and biodiversity, prevent and eliminate pollution of our ocean, seas and waters, and make the blue economy carbon-neutral and circular.
- Increased resilience of waterfront communities to extreme climate events and sea-level rise.

¹⁵² The term city is used to refer to a geographical subnational jurisdiction (“local administrative unit”) such as a town or a city that is governed by a local government as the legal entity of public administration, understanding that the institutions of local governments may vary from country to country and terminology used in national contexts may differ. Cities must have at least 50 000 inhabitants. For countries with a lower number of larger cities, this population threshold is lowered to 10 000 inhabitants. Those countries are: Croatia (HR), Cyprus (CY), Estonia (EE), Ireland (IE), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Slovenia (SI) and Slovakia (SK).

¹⁵³ <https://land.copernicus.eu/en/products/coastal-zones>

¹⁵⁴ <https://land.copernicus.eu/en/products/riparian-zones>

¹⁵⁵ See section 1.2. of the Mission Ocean and Waters Implementation Plan: https://research-and-innovation.ec.europa.eu/system/files/2021-09/ocean_and_waters_implementation_plan_for_publication.pdf

Public and private investment is encouraged and leveraged at urban level to protect and restore degraded ecosystems, to prevent and eliminate pollution, and make the blue economy carbon-neutral and circular, and mitigate the impact of climate change on urban communities.

Scope: The goal of this topic is to accelerate the implementation of innovative solutions to achieve Mission objectives and targets in waterfront cities and ports.

The project should test and demonstrate effective solutions to achieve the Mission's specific objectives and targets in waterfront cities. The project should thus test and demonstrate solutions that contribute to:

1. protecting and restoring marine and freshwater ecosystems and biodiversity, in line with the EU Biodiversity Strategy 2030 and Nature Restoration Regulation, and/or
2. preventing and eliminating pollution of our ocean, seas and waters, in line with the EU Action Plan Towards Zero Pollution for Air, Water and Soil and/or
3. making the sustainable blue economy carbon-neutral and circular, in line with the European Climate Law and the holistic vision enshrined in the Sustainable Blue Economy Strategy.

Demonstration activities are expected to take place in at least [8] waterfront cities or ports with at least [2] in each of the four sea and river basins: 1. Atlantic and Arctic Sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin, 4. Danube River basin, including Black Sea, with strong and meaningful involvement of public bodies managing waterfront cities and port authorities.

Projects under this topic would be place-based and people-centred, with their activities implementing a systemic transition across all Mission objectives and enablers, in all lighthouses. Special emphasis should be placed on nature-based solutions, land-sea interactions, and transboundary actions. The projects should support the blue economy by integrating sustainable and environmentally friendly methods that are both ecologically and economically beneficial. Resilience of waterfront communities to climate related extreme events, sea-level rise and water resilience should also be addressed.

The project should:

- Assess the economic, social and ecological impacts as well as the societal acceptance of the proposed measures to achieve the Mission objectives and targets in waterfront cities and ports;
- Identify, test and adapt innovative solutions to restore cities and ports by addressing one or several of the specific Mission objectives and targets;
- Facilitate citizen and stakeholder involvement and uptake through active participation in the restoration initiatives of coastal regions and riparian zones (e.g. through living labs), and through the follow-up of the restoration process with citizen science initiatives;

- Develop new innovative funding approaches to implement innovative solutions for the restoration of the ocean and waters in cities which are all operating in different jurisdictions and governance contexts;
- Monitor the effectiveness of the proposed solutions in relation to the Mission objectives and targets;
- Facilitate synergies with other R&I-relevant EU, national or regional programmes and leverage of funds through interactions with regional/local authorities and the private sector where relevant.

Under the Mission approach, collaborations to demonstrate, test and deploy effective innovative solutions between cities and ports facing similar challenges are highly encouraged and considered as a means to secure a larger impact. To facilitate replication of the solutions, proposals should already identify other suitable cities and ports where the solutions and approaches could be replicated. Projects should also systematically assess the potential barriers to their implementation and how these can be overcome. This would help enhancing the transferability of the knowledge and experiences to other cities and ports.

For the successful implementation of the solutions and to ensure their sustainability beyond the duration of the project, the testing and demonstration of the proposed solutions should support the River Basin Management Plans under the Water Framework Directive, the Programme of Measures under the Marine Strategy Framework Directive, future national Nature Restoration Plans under the Nature Restoration Regulation, as well as, wherever already in place, existing mechanisms such as *coastal restoration contracts*¹⁵⁶, *river contracts*¹⁵⁷ or *Integrated Coastal Zone Management (ICZM)*, etc. Proposed solutions should be based on good knowledge about coastal and riparian ecosystems to be restored. If necessary, projects may include mapping and assessment of condition of related habitats and species.

Public bodies managing cities and port authorities participating in the project are encouraged to pool and enhance synergies¹⁵⁸ with other sources of funding (e.g. structural, cohesion funds such as ERDF, or LIFE) for implementing and deploying innovative solutions, through e.g. the conclusion of a Cooperation Working Arrangement¹⁵⁹. This will support a common approach towards urban waterfront ecosystem restoration, and sustain the implementation of solutions, transfer of knowledge and innovative solutions, and identify opportunities to scale up the solutions demonstrated and to foster their broad deployment across Europe.

The project should build (when relevant) on previously developed or existing solutions by other projects, funded by EU and national programmes, in particular the European Union Framework programmes for Research and Innovation (such as Horizon 2020 and Horizon

¹⁵⁶ Cf HE2020 RESTCOAST project

¹⁵⁷ Cf example <http://environnement.wallonie.be/contrat%5Ffriviere/>

¹⁵⁸ C(2022) 4747 final

¹⁵⁹ https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/eu-mission-ocean-and-waters-signs-first-cooperation-working-arrangement-eu-region-2024-12-17_en

Europe under their different pillars and clusters and from the EU Mission on Cities), as well as EMFAF, INTERREG and LIFE programmes. Proposals should also establish links with “HORIZON-MISS-2024-OCEAN-02-01: Community-led actions to restore our ocean, seas and waters” and “HORIZON-MISS-2024-OCEAN-02-02: Support for the Coalition of waterfront cities, regions and islands for Mission Ocean and Waters”, and are encouraged to consider, where relevant, the services offered by European research infrastructures¹⁶⁰.

The funded project should share experiences and good practices with the projects selected under the joint topic of the EU Mission Cities and Zero Emission Waterborne Transport Partnership on “Real time monitoring of regulated and non-regulated emissions in order to enforce emission limits in waterfront cities (HORIZON-MISS-CIT-CL5-2025-0X-0X).

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Lighthouses CSAs and the Mission Implementation Platform, notably to contribute to tracking progress towards the objectives of the Mission.

HORIZON-MISS-2025-03-OCEAN-06: Restoring Ocean and Waters on Islands

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 13.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 13.50 million.
<i>Type of Action</i>	Innovation Actions
<i>Other conditions</i>	The proposed actions should implement their activities in at least [6] islands, aiming for an equal distribution across the following lighthouses ¹⁶¹ of the Mission Ocean and Waters: Baltic/North Sea, Atlantic/Arctic and Mediterranean.
<i>Evaluation Procedure</i>	The evaluation committee might be composed partially by representatives of EU institutions

Expected Outcome: This topic aims at directly engaging and supporting islands¹⁶² and their managing public authorities in demonstrating and accelerating the transitions needed for

¹⁶⁰ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

¹⁶¹ For the purposes of Mission Ocean and Waters, Member States/Associated Countries, are considered to be part of a given sea/river basin if they have a coast/riverbank on the relevant sea/river or contain river basins flowing into the relevant sea.

¹⁶² In the context of this topic, islands are defined as territories within the European Union and Associated Countries surrounded by water.

achieving one or several objectives of the Mission “Restore our Ocean and Waters”. The participation of relevant island managing authorities¹⁶³ as full partners of the consortium is strongly encouraged.

Project results are expected to contribute to all of the following expected outcomes:

- Measurable, quantifiable, verifiable and ambitious progress towards reaching one or several interlinked objectives and targets of the Mission “Restore our Ocean and Waters by 2030”, as set out in the Mission Implementation Plan¹⁶⁴ through implementation of effective and well-managed place-based and people-centred actions.
- Involvement and increased readiness of islands in testing, deploying and upscaling systemic innovative solutions for restoring islands, incl. by strengthening synergies with their own programmes and resources.
- Increased number of islands taking concrete measures to protect and restore marine and freshwater ecosystems and biodiversity, prevent and eliminate pollution of our ocean, seas and waters, and make the blue economy carbon-neutral and circular.
- Increased resilience of island communities to extreme climate events and sea-level rise.
- Public and private investment is encouraged and leveraged on islands to protect, conserve and restore degraded ecosystems.

Scope: The goal of this topic is to work with public authorities to accelerate the implementation of innovative solutions to achieve Mission objectives and targets on islands, including small ones.

The project should test and demonstrate effective solutions to achieve the Mission’s specific objectives and targets on islands. The project should thus test and demonstrate solutions contribute to:

1. protecting and restoring marine and freshwater ecosystems and biodiversity, in line with the EU Biodiversity Strategy 2030 and Nature Restoration Regulation, and/or
2. preventing and eliminating pollution of our ocean, seas and waters, in line with the EU Action Plan Towards Zero Pollution for Air, Water and Soil and/or
3. making the sustainable blue economy carbon-neutral and circular, in line with the European Climate Law and the holistic vision enshrined in the Sustainable Blue Economy Strategy.

Demonstration activities are expected to take place on at least [6] islands with at least [2] in each of the following basin lighthouses: 1. Atlantic and Arctic Sea basin, 2.

¹⁶³ Regional or local authorities managing islands

¹⁶⁴ See section 1.2. of the Mission Ocean and Waters Implementation Plan: https://research-and-innovation.ec.europa.eu/system/files/2021-09/ocean_and_waters_implementation_plan_for_publication.pdf

Mediterranean Sea basin, 3. Baltic and North Sea basin, with strong and meaningful involvement of relevant public authorities.

Projects under this topic would be place-based and people-centred, with their activities implementing a systemic transition across all Mission objectives and enablers, in all lighthouses. Special emphasis should be placed on nature-based solutions, land-sea interactions, and transboundary actions. The projects should support the blue economy by integrating sustainable and environmentally friendly methods that are both ecologically and economically beneficial. They will also address resilience of island communities to climate related extreme events and sea-level rise.

The project should support islands (and are encouraged to work with islands that have small but growing populations, limited resources, remoteness, susceptibility to natural disasters, vulnerability to external shocks, excessive dependence on external resources, and fragile environments, so that the projects help addressing their vulnerability to environmental changes, economic size, and isolation challenges. Furthermore, small islands and their communities offer the opportunity to function as models and living labs for piloting the needed transitions in a reasonably small-scale context. Following and expanding the example of the EU green energy pilot islands¹⁶⁵, the project should help small islands to implement the ecological, socio-economic and circular transitions needed to ensure their ecosystems restoration, energy- and water-security, a sustainable and circular blue economy, and climate resilience, along the Mission objectives.

The project should:

- Assess the economic, social and ecological impacts as well as the societal acceptance of the proposed measures to achieve the Mission objectives and targets on islands;
- Identify, test and adapt innovative solutions to restore islands by addressing one or several of the specific Mission objectives and targets;
- Develop new innovative funding approaches to implement innovative solutions for the restoration of the ocean and waters on islands, which are all operating in different jurisdictions and governance contexts;
- Encourage citizen and stakeholders involvement and uptake through active participation in the restoration initiatives of islands (e.g. through living labs), and through the follow-up of the restoration process with citizen science initiatives;
- Monitor the effectiveness of the proposed solutions in relation to the Mission objectives and targets;

¹⁶⁵ [The Journey Begins 30 Renewable Islands for 2030 - Ready, Set, 30! | Clean energy for EU islands \(europea.eu\)](https://europea.eu)

- Facilitate synergies with other R&I-relevant EU, national or regional programmes and leverage of funds through interactions with regional/local authorities and the private sector where relevant.

Under the Mission approach, collaborations to demonstrate, test and deploy innovative solutions between islands facing similar challenges are highly encouraged and considered as a means to secure greater impact. To facilitate replication of the solutions, proposals should already identify other suitable islands, where the solutions and approaches could be replicated. Projects should also systematically assess the potential barriers to their implementation and how these can be overcome. This would help enhancing the transferability of the knowledge and experiences to other islands and beyond.

For the successful implementation of the solutions and to ensure their sustainability beyond the duration of the project, the testing and demonstration of the proposed solutions should support the River Basin Management Plans under the Water Framework Directive, the Programme of Measures under the Marine Strategy Framework Directive, future national Nature Restoration Plans under the Nature Restoration Regulation, as well as, wherever already in place, existing mechanisms such as *coastal restoration contracts*¹⁶⁶, *river contracts*¹⁶⁷ or *Integrated Coastal Zone Management (ICZM)*, etc. Proposed solutions should be based on good knowledge about coastal and riparian ecosystems to be restored. If necessary, projects may include mapping and assessment of condition of related habitats and species.

Island authorities participating to the project are encouraged to pool and enhance synergies¹⁶⁸ with other sources of funding (e.g. structural, cohesion funds such as ERDF, or LIFE) for implementing and deploying innovative solutions through e.g., the conclusion of a Cooperation Working Arrangement¹⁶⁹. This will support a common approach towards island restoration, sustain the implementation of solutions, transfer of knowledge and innovative solutions, and identify opportunities to scale up the solutions demonstrated and to foster their broad deployment across Europe.

The project should build (when relevant) on previously developed or existing solutions by other projects, addressing island restoration and funded by EU and national programmes, in particular the European Union Framework programmes for Research and Innovation (such as Horizon 2020 and Horizon Europe under their different pillars and clusters), as well as EMFAF, INTERREG and LIFE programmes. Proposals should also establish links with “HORIZON-MISS-2024-OCEAN-02-01: Community-led actions to restore our ocean, seas and waters” and “HORIZON-MISS-2024-OCEAN-02-02: Support for the Coalition of

¹⁶⁶ Cf HE2020 RESTCOAST project

¹⁶⁷ Cf example <http://environnement.wallonie.be/contrat%5Ffriviere/>

¹⁶⁸ C(2022) 4747 final

¹⁶⁹ https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/eu-mission-ocean-and-waters-signs-first-cooperation-working-arrangement-eu-region-2024-12-17_en

waterfront cities, regions and islands for Mission Ocean and Waters”, and are encouraged to consider, where relevant, the services offered by European research infrastructures¹⁷⁰.

To foster synergies between R&I funding instruments (European, national and regional), align R&I investments, ensure access to excellence and translate research results for the benefit of the society and the economy, applicants should consider and actively seek complementarities with, and where appropriate possibilities for further funding from other R&I-relevant EU, national or regional programmes for a sustainable blue economy, notably EMFF/EMFAF, LIFE, ERDF, ESF+, JTF, CEF Inland Waterways or Maritime and InvestEU, as well as private funds or financial instruments.

Proposals should include a mechanism and the resources to establish operational links and collaboration with the Lighthouse CSAs and the Mission Implementation Platform, notably to contribute to tracking progress towards the objectives of the Mission.

Cooperation with the EU Outermost Regions¹⁷¹ is encouraged, given these regions’ natural assets.

HORIZON-MISS-2025-03-OCEAN-07: Mission Lighthouses coordination and support activities

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 3.55 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 14.20 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering the 4 different Mission basins¹⁷² (1. Atlantic and Arctic sea basin, 2. Mediterranean Sea basin, 3. Baltic and North Sea basin, 4. Danube River basin, including Black Sea), grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each</p>

¹⁷⁰ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

¹⁷¹ https://ec.europa.eu/regional_policy/policy/themes/outermost-regions_en

¹⁷² For the purposes of Mission Ocean and waters, Member States/Associated Countries, are considered to be part of a given sea/river basin if they have a coast/riverbank on the relevant sea/river or contain river basins flowing into the relevant sea.

	sea basin, provided that the applications attain all thresholds.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹⁷³ .
<i>Evaluation Procedure</i>	The evaluation committee might be composed partially by representatives of EU institutions

Expected Outcome: The ‘lighthouse’ basin approach designed for the first phase of the Mission will be enhanced, through the support to basin-specific activities implementing all Mission objectives and developing further solutions needed for replication and scale-up during the second phase, and thus strengthening basin-scale cooperation and governance. Project results are expected to contribute to all the following expected outcomes:

- Structuring effect to advance and/or consolidate the national and regional *hubs* supporting the implementation of all Mission Ocean and waters’ objectives at basin level and to ensure coherence and alignment of policies, initiatives and actions at EU, national and local level;
- Well-coordinated activities underpinned by a consistent monitoring framework to assess the implementation and achievement of the Mission objectives;
- Effective provision to local stakeholders of technical services, governance and business models to support and guarantee a sustainable socio-economic development of the basins;
- A well-functioning basin scale innovation ecosystem attractive to investors and businesses;
- Increased and effective awareness about the Mission and involvement of citizens in its implementation at sea/river basin scale;
- Increased coordination and collaboration between the various lighthouses (sea/ river basins);
- Greater involvement from public procurement bodies in the innovation cycle and accelerated uptake of innovative solutions;

¹⁷³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- The regional implementation of the UN Decade of Ocean Science for Sustainable Development 2021-30 is strengthened.

Scope: In the context of the Mission Ocean and waters, 'lighthouses' are defined as "*hubs and platforms supporting the development and deployment of transformative innovative solutions in all forms – technological, social, business, governance, ensuring fast progress towards the achievement of Mission objectives and important impact on society in the river and sea basins through science and technology*".

The Mission supports regional engagement and cooperation through four area-based 'lighthouses' in the major basins, the Atlantic-Arctic, Mediterranean Sea, Baltic-North Sea, and Danube River-Black Sea basins, and applies a systemic approach addressing the inland waters-sea continuum.

Proposals under this topic are expected to bring together complementary public and/or private organisations and networks, and integrate heterogeneous expertise to support the continuity of the four existing Lighthouses, expanding their scope to all mission objectives to facilitate the implementation of the second phase of the mission.

Actions should provide a broad portfolio of support measures to relevant stakeholders at basin level, ensuring the replication and upscale of innovative solutions addressing all objectives of the Mission Ocean and waters in a given lighthouse area.

Due to the transboundary nature of waters, basin-scale coordination and cooperation across regions is required for solutions to be effectively implemented and to resolve shared problems.

Proposals are expected to show how their activities and results will achieve the Mission's objectives, in line with the timeframe of the Mission phases, i.e. by 2030 for the 'deployment and upscaling phase'. Proposals are encouraged to consider, where relevant, cooperation with European research infrastructures¹⁷⁴.

Building on and bringing together existing governance structures and networks and relevant existing activities, proposals are expected to address all following activities:

- Support the replication and upscale of innovative solutions in the specific basin lighthouse:
 - o disseminate and raise awareness about suitable, impactful innovative and transformative solutions to progress towards the objectives of the mission;
 - o organise demonstration and testing activities for the innovative solutions;

¹⁷⁴ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

- o support access to finance and mobilise suitable investors, through e.g.: pitching events, networks of investors, venture capital funds, local Entrepreneurial Discovery processes, etc.;
- o support knowledge and technology transfer, including through training and skill development;
- o support the involvement and cooperation of 'associated regions', essential actors for the implementation of the mission objectives at basin scale;
- Design and carry out at basin scale relevant actions to promote Mission ocean and waters and its activities targeting different stakeholders and the general public, both at basin scale and at the regional/local level: disseminate information, exchange knowledge and good practices on the deployment of innovative solutions, on European and national procurement processes as well as on regulatory issues;
- Support the mobilisation of national and regional funds as well as private financing around common objectives:
 - o design joint initiatives under the Mission Ocean and waters, such as joint programmes or calls for R&I actions between the national and the EU level (based on the current programme co-fund actions) to address priorities of common interest at trans-regional/national level and ensure critical mass and effective use of resources;
 - o support the alignment and test synergies between Regional Smart Specialisation Strategies and other relevant European programmes;
 - o target relevant funding organisations such as investment funds, banks and philanthropists at national/regional levels to facilitate mobilisation of the funding;
 - o support Pre-Commercial Procurements (PCP) and/or Public Procurement of Innovative solutions (PPI) by bringing together procurement agencies or departments in charge of the acquisition of innovative solutions at European, national, regional or local level to share investment plans and/or to plan common procurements of research services or of innovative solutions or products in the domains covered by Mission ocean and waters.
- Contribute to the overall monitoring of the Mission implementation by providing relevant information in relation to each basin lighthouse area and liaising with Mission projects to collect relevant data and information;
- Strengthen lighthouse governance and networking:
 - o liaise with the Mission secretariat to ensure a coherent and timely implementation of the Mission deployment and upscaling phase in the lighthouse basin;

- o bring relevant new actions and initiatives under the Mission charter to promote their visibility and possible replication/uptake, including by connecting with other relevant initiatives in the basin such as Ocean Decade Actions and partners;
- o support an effective and participatory governance structure for the basins lighthouse involving key multi-sectoral stakeholders at sea/river basin level covering both marine and inland waters as well as the land-sea continuum and ensure cooperation and networking for achieving the three objectives of the Mission Ocean and waters by 2030;
- o liaise with the UN Ocean Decade actions and initiatives and promote international cooperation (e.g.: UN ECOP, OECD, etc.);
- o consolidate existing national and regional mission *hubs* or support their set up if not in place already, to provide the framework for coordinating and aligning policies, initiatives and actions at EU, national and local level, including cooperation with the National Contact Points (NCPs) and Mission Board members, where relevant;
- o Organise regular exchanges of best practices between *hubs* of this Mission and of the other four EU Missions, e.g. in the area of stakeholder and citizen engagement, long-term sustainability of mission hubs, and building of synergies..

The proposals should build on and enhance the outcomes stemming from the actions implemented in previous Mission work programmes such as Prep4Blue¹⁷⁵, BlueMissionAA¹⁷⁶, BlueMissionMed¹⁷⁷, BlueMissionBANOS¹⁷⁸ and EcoDaLLi¹⁷⁹ or actions supporting networking and engagement.

This topic supports the follow up to the July 2023 Communication on EU Missions assessment¹⁸⁰.

HORIZON-MISS-2025-03-OCEAN-08: EU Digital Twin Ocean: Contribution to the EU DTO core infrastructure through applications for sustainable ocean management

Call: Supporting the implementation of the Restore our Ocean and Waters Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

¹⁷⁵ <https://prep4blue.eu>

¹⁷⁶ <https://bluemissionaa.eu/>

¹⁷⁷ <https://bluemissionmed.eu/>

¹⁷⁸ <https://bluemissionbanos.eu/>

¹⁷⁹ <https://ecodalli.eu/>

¹⁸⁰ COM(2023) 457 final and SWD(2023) 260 final

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries will be subject to the following additional obligations regarding open science practices: if projects collect in-situ data and marine observations, beneficiaries must make them openly available through the European Marine Observation and Data network (EMODnet), based on the FAIR (Findable, Accessible, Interoperable, Reusable) principles.</p> <p>Grants awarded under this topic will be linked to the following action(s):</p> <p>HORIZON-MISS-2024-OCEAN-IBA-01 EU Public Infrastructure for the European Digital Twin Ocean, phase 2</p>

Expected Outcome: The European Digital Twin of the Ocean core infrastructure (EDITO)¹⁸¹ is the platform that consolidates European Marine Knowledge, bringing together marine observation and data, an extended variety of ocean models (covering all the dimensions, from physics to social-ecological), digital applications and tools as well as advanced computing capabilities. The goal is to enable the development of multiple verified virtual representations of the marine and coastal systems, including transitional waters (e.g.: land-sea continuum), which will simulate the complex and dynamic nature of oceanic systems and test their evolution under different future scenarios, offering insights and capabilities that go beyond traditional models or simulations.

By integrating real-time and historical observations with advanced numerical modelling, artificial intelligence and high-performance computing, digital twins of the ocean can provide ocean stakeholders (scientists, business operators, regulatory authorities, policy makers and civil society) with an innovative set of user-driven and interactive digital tools to support their activities. In particular, they will support decision making, allowing to monitor and continuously refine the assessment of the impacts of decisions, in terms of sustainability, efficiency, effectiveness and durability under different possible future scenarios (climate change, ecosystems adaption, anthropogenic pressures, etc.). Interactive visualisation tools

¹⁸¹ <https://www.edito.eu/>

will allow users to explore and interact with simulated ocean environments in intuitive ways, enhancing understanding and facilitating communication of complex oceanic phenomena.

EDITO is conceived, and being built, as a public service and open co-working environment to support and facilitate the development of specific sectorial and/or local digital twin ocean applications. The objective of this topic is to develop specific user-driven digital twin ocean applications, relying on the EU DTO core infrastructure (EDITO) capabilities but also contributing to its development by enriching the array of open data, models and services it provides.

Project results are expected to contribute to all following expected outcomes:

- Digital Twin Ocean applications, co-designed through appropriate stakeholder engagement along the marine knowledge value chain, and in particular the final users (local and regional authorities, business, etc).
- Improved FAIR (Findable, Accessible, Interoperable and Reusable) dataflows and best practices across the data value chain: harmonisation and standardisation of data formats (including units), acquisition, collection, quality assurance and sharing.
- Increased availability of models and related best practices on the EU DTO core infrastructure (EDITO) and development of relevant applications directly on the EDITO infrastructure, using the offered capabilities. Models availability enhancement could therefore relate, for instance, to bio-geochemical, species distribution, ecosystem and integrated coastal and marine models, coupled models incorporating environmental, social, economic and policy considerations, and more.
- Improved data assimilation processes and interconnections between models, including land use, hydrological (water quality and quantity) and marine models in a source-to-sea perspective. The resolution of the models should be adequate to properly resolve the requirements of each application, while identifying and quantifying the impact of increased availability of data in the quality and scope of the applications.
- Improved and increased amount of digital twin intermediate and final open services, directly developed into the EU DTO core infrastructure (EDITO).

Scope: Proposals should target at least two new Digital Twin Ocean (DTO) domain applications, either addressing policy or regulatory implementation¹⁸² or sustainable marine or

¹⁸² Marine Strategy Framework Directive - MSFD, Maritime Spatial Planning Directive - MSPD, Common Fisheries Policy, design of Marine Protected Areas - MPAs and design of Other Effective Conservation Measures (OECMs), sea level rise, coastal resilience and adaptation, pollution monitoring and reduction, cumulative impact across multiple sectors, frameworks for assessing opportunities for sustainable growth in marine industries, etc., compatibility of future offshore developments to reach climate targets and 2030 Biodiversity Strategy and Nature Restoration Law, etc. Proposals addressing offshore energy renewables or marine litter should ensure complementarity with the scope addressed by, respectively, HORIZON-CL5-2025-05-D3-08: Understand and minimise the environmental impacts of offshore wind energy and HORIZON-CL6-2025-01-ZEROPOLLUTION-05: Towards a comprehensive European strategy to assess and monitor aquatic litter including plastic and

maritime business operations (aquaculture and fisheries, sustainable tourism, etc.), with demonstrated usability at different geographical scales, for ocean and coastal management and planning, policy or regulatory implementation and decision-making or sustainable marine and maritime business operations. Each verified use cases (implementation of the domain applications at different geographic settings, including the relevant data, models, tools and interactions with stakeholders) should be demonstrated in at least 3 different sea basins (amounting to 6 use cases in total), with each of the 4 EU sea basins (1. Atlantic and Arctic Sea basin, 2. Baltic and North Sea, 3. Mediterranean Sea basin and 4. Danube River basin and Black Sea) covered at least by one use-case.

Importantly, while these digital twin ocean applications are the desired end-product, they have an integrative function: to transform the available knowledge into actionable information for use from policy, industry and/or civil society. When designing a specific application, the whole knowledge value chain should be considered by the proposals, with a multi-actor approach, to ensure the involvement of the appropriate actors, including implementing authorities in the appropriate level of jurisdiction (national and/or regional authorities), at each step:

- Co-creation with stakeholders: include the end-users of these applications, for each sea-basin use-case, along the full process of the digital twins' development, ensuring incorporating their needs, promoting common understanding and ensuring ownership of the outcomes (what scenarios are relevant, what policy alternatives are feasible, what are the limitations, for instance on uncertainties created by data gaps, etc.). The relevant stakeholders may evolve throughout each development phase/step.
- Data: identification of data needs to verify the credibility of each application; identification of gaps and their impact on the quality of results; potential for improvements (if data is to be made available).
- Models and what-if scenarios: primary data processing and analysis, model developments, refinements and downscaling; model coupling to serve targeted needs and development of what-if and policy scenarios (together with relevant stakeholders), quality of modelled assessment data products.
- Interactive visualisation tools. Specific attention to the design of appropriate interfaces with and for end-users, utilising new technologies as artificial intelligence, gaming interfaces, virtual reality and more.
- Quality assurance processes and appropriate quality labelling should accompany all steps of development to provide guarantee to the end-users of the applications: labelling of applications, comparative analysis, characterisation and communication of uncertainties in particular in the context of decision-making support, etc.

Proposals are encouraged to cooperate with actors such as the European Commission's Joint Research Centre (JRC) on model scenarios (as for the Blue2MF) in support of marine policies.

Proposals should favour open data, open source, and public-use models and algorithms with open-source licensing and must develop the applications directly into the EU Digital Twin of the Ocean core infrastructure (EDITO).

Proposals should leverage the data and services available through EMODnet and through the European Open Science Cloud, as well as data from relevant Data Spaces in the data-driven analyses and should also demonstrate clear links to Copernicus Marine and associated Member State Coastal Systems (MSCS). Proposals are encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures. The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website¹⁸³.

Proposals are expected to build on the outcomes of EDITO-Infra and EDITO-Model Lab and to contribute to the enrichment of the portfolio of biogeochemical, ecosystem marine and integrated coastal models, beyond those already integrated by EDITO-model lab.

While proposals are free to address the application domains of their choice, aiming for the greatest possible impacts, specific aspects should be followed for applications relating to the implementation of EU legislation, as indicated below:

- Models targeting MSFD implementation at the regional and national levels should implement a multi-descriptor approach including possible connectivity between descriptors and propose methodological frameworks for the design of effective measures to achieve Good Environmental Status (GES), based on the requirements of the Directive.
- Applications relevant to Descriptors 1, 2, 3, 4 and 6 of the MSFD should address multispecies systems (group of species), according to the requirements of Commission Decision (EU) 2017/848 and the 2021 ICES advice sr.2021.14.2.
- The what-if scenarios of applications to implement marine nature based-solutions for climate change adaptation and mitigation, should also address the achievement of Good Environmental Status.
- Applications for decision support tools on the planning and management of marine space (MSPD) should include environmental, social, economic and policy considerations and take into account climate change impacts through appropriate scenarios.
- Applications targeting the CFP should support the assessment of Essential Fish Habitats and Vulnerable Marine Ecosystems (also relevant for Regional Fisheries Management Organisations - RFMOs, Biodiversity Strategy and more), while also addressing the

¹⁸³ <https://ri-portfolio.esfri.eu/>

sustainability of the fisheries sector through scenarios related to fishing gear, decarbonisation of the sector and more.

Restore our Ocean and Waters by 2030: Other Actions

1. Presidency event - Mission Ocean and Waters conference

Expected outcome:

The proposed conference in Nyborg, Denmark 23-24 September 2025 under the Danish Presidency will address the restoration of the Ocean and Waters. This conference is expected to contribute to all of the following expected outcomes:

- challenges facing the Ocean and waters are explored and the solutions and opportunities offered by the Mission to address these problems;
- the focus and priorities for the Mission's deployment phase are discussed and key stakeholders are mobilised.

Scope:

The conference should address the following activities:

- discuss the new political context of Ocean and Waters and how to support the deployment of the Mission;
- provide a space for a presentation of the key achievements of the Mission Ocean and Waters and explore priorities for reaching the 2030 Mission objectives and targets;
- Further strengthen the governance of the Mission at EU, lighthouse and national level.

Specific conditions:

The starting date of the grant awarded under this action may be as of the submission date of the application.

Subcontracting is not restricted to a limited part of this action.

The evaluation committee will be composed fully by representatives of EU institutions.

Legal entities:

University of Southern Denmark, Campusvej 55, 5230 Odense M, Denmark

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 195(e) - Coordination and support action

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and

operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: As of second quarter 2025

Indicative budget: EUR 0.16 million from the 2025 budget

2. Services to Communities to support the achievement of the objectives of the Mission Ocean and Waters.

The specific objective of this contract is to organize and manage the identification and selection process, aiming at selecting a minimum of 50 applicants from targeted communities of regional, local and other competent authorities, which are managing programmes and activities related to the Mission objectives, and provide services to them. The services provided consist of technical assistance and support for the preparation of transition agendas for their planned projects, programmes or initiatives that will support the achievement of the objectives of the Mission Ocean and Waters. In particular, the targeted authorities include: i) regions ii) cities, including small municipalities iii) rivers and water management authorities and iv) port authorities. These services should ultimately facilitate synergies with regional/local authorities to facilitate and speed up the achievement of the Mission's objectives at local level, with the involvement of local communities and possible leverage of funds.

Services include:

1. Technical assistance to competent authorities for planned initiatives, projects, or activities that are defined to achieve the Mission's objectives within a specific community or geographical area. Such assistance should address the needs of the Mission communities of actors in the particular basin and may include support and advice needed for the preparation of business plans, feasibility studies, impact assessments, and needs assessment, as well as long-term sustainability planning to help the competent authorities develop sustainable financing strategies to ensure longevity of the efforts to achieve healthy oceans, seas and waters; capacity building to empower competent authorities with the knowledge and skills needed to undertake effective pollution prevention and elimination, conservation and restoration initiatives, as well as making the sustainable blue economy carbon-neutral and circular; and other Mission-related actions that would require direct counselling, written guidance, online materials, webinars, in-depths sessions, deep dives, peer-to-peer support, twinning etc. It is essential to tailor the support provided to the specific needs and context of each community of actors, including through the use of local languages, as well as fostering a participatory approach that empowers local stakeholders and encourages their long-term commitment to the protection and restoration of our ocean, seas and waters.
- Support the preparation of transition agendas intended as a strategic roadmap towards reaching all objectives and targets of the Mission 'Restore our ocean and waters by 2030', with a particular focus on the objectives that are most relevant to the specific local

context and communities. The roadmaps could cover processes needed to ensure the protection and restoration of marine/coastal/inland waters, biodiversity and ecosystems, the reduction/elimination of pollution and the achievement of decarbonisation and circularity targets, as well as resilience and preparedness taking into account the impacts of climate change and extreme events. They should include a plan for a defined number of years concerning the objectives set, covering, for example, expected outcomes, results, impact, ways to achieve them and ways to bring in financing to support the achievement of these objectives. The transition agenda should indicate how specific results and ideally also their impacts are expected to materialise in order to ensure the actual achievements of the objectives. These agendas would serve as a basis for further planning of follow-up activities by the authorities involved, particularly actions to meet the Mission Ocean and Waters objectives/targets, to be subsequently implemented with the financial support of various funds (e.g., EU structural funds/national/regional funds).

- Overall, these services should accelerate the achievement of the Mission's objectives, including through facilitated synergies and access to EU, national, regional programmes and funds, in interaction with managing authorities (e.g. ERDF, EMFAF, LIFE, Interreg, RRF, S3, etc). Regional authorities a Cooperation Working Arrangement with the Commission on this Mission¹⁸⁴ and managing authorities having adhered to the Mission Charter will be considered for services in priority.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: As of Q2 2025

Indicative budget: EUR 3.98 million from the 2025 budget

3. Ocean Observation Platform

Ocean observation is currently undertaken independently for different purposes including fisheries management, safe navigation, coastal protection, environmental impact assessment and research. In order to avoid duplication, identify gaps and reduce administrative burden, a digital platform will be further developed and maintained and building on existing observation initiatives, such as EuroGoos and European Research Infrastructures. The digital platform will collect observation campaign plans prepared by the responsible public bodies following common standards. This platform will reinforce EmodNet and the European Digital Twin Ocean by ensuring structured reliable data provision that will allow it to fulfil its potential as a tool underpinning a competitive and sustainable blue economy.

Form of Funding: Procurement

¹⁸⁴ https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/eu-mission-ocean-and-waters-signs-first-cooperation-working-arrangement-eu-region-2024-12-17_en

Type of Action: Public procurement

Indicative timetable: 4th Quarter 2026

Indicative budget: EUR 1.50 million from the 2025 budget

4. Study to provide evidence for EU actions on wetlands

Wetlands contribute to all three objectives of Mission “Restore our Ocean and Waters”. If managed appropriately they can enhance biodiversity, improve water quality and sequester carbon. From 2026 they should be included in EU Member State inventories of greenhouse gases in the EU’s Land Use, Land Use Change and Forestry Regulation (LULUCF) ¹⁸⁵.

Their ecosystems must meet the 2030 targets set out in the Nature Restoration Law¹⁸⁶. Under the IPCC’s 2013 guidelines for reporting national inventories¹⁸⁷, saltmarsh, seagrass and mangroves are classed as coastal wetlands. Coastal wetlands are also referred to as coastal blue carbon. This study covers freshwater and coastal wetlands.

A study under Mission Ocean has shown that (1) some Member States already report greenhouse gas inventories for wetlands to LULUCF although there are differences in how it is done (2) no Member State has indicated an intention to include a separate accounting of blue carbon within the wetland landuse category (3) finding, access, and harmonising the necessary data is a barrier to providing reliable inventories. The reporting requirements for wetlands habitats under the Nature Restoration Law will face the same data challenges. Measures to resolve these data issues would not only contribute to more accurate inventories but also provide a solid foundation for enabling authorities to certify blue carbon under the EU certification framework for carbon removals by carbon farming¹⁸⁸. The EU has already taken measures to improve the evidence base for monitoring forests¹⁸⁹. The aim of this study is to understand what would be required to achieve the same for wetlands and provide the knowledge base necessary to implement existing legislation and to underpin future actions at EU level.

The study will (1) identify current and upcoming EU legislation and intergovernmental agreements requiring data on both freshwater and coastal wetlands extent and functioning (2) develop a set of indicators that would meet the reporting requirements of each of these agreements taking into account any ongoing efforts at an international level (3) identify the data required to estimate these indicators. This should use a common nomenclature of wetland ecosystems, distinguish between classifications of 2006 and 2013 IPCC guidelines and between data that can be acquired from earth-orbiting satellites and those that require

¹⁸⁵ Regulation (EU) 2018/841 as amended by Regulation (EU) 2023/839

¹⁸⁶ Regulation (EU) 2024/199

¹⁸⁷ 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands

¹⁸⁸ Proposal for a regulation establishing a Union certification framework for carbon removals, COM/2022/672

¹⁸⁹ Proposal for a regulation on a monitoring framework for resilient European forests COM/2023/728

measurements made by other means (4) determine the adequacy and completeness of the data provided from existing European or international data services including the Copernicus Land Service, EMODnet and European Soil Data Centre and whether it can be enhanced (5) interview national authorities to determine the feasibility and cost of assembling data in a common interoperable format in order to estimate the indicators defined, (6) structure the results and insights of this study in an Access database, (7) validate the results at a workshop of recognised international experts and (8) provide the knowledge base for future actions at EU level.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 0.90 million from the 2025 budget

5. Communication actions and events for Mission Ocean and Waters

The objective is to organise Mission Ocean and Waters events that will give visibility to the achievement of the Mission and its activities including Info Days, bring together key stakeholders and Mission partners, including Member States, regions, research bodies and academia, civil society and organisations and promote the Mission activities and projects among key Mission partners, stakeholders and citizens.

The action is expected to lead to:

- Increased knowledge and awareness of the Mission and its activities among Member States, regions and communities and key Mission partners and general public;
- Increased support and acceleration of the implementation of Mission activities, such as Mission lighthouses;
- Provide cooperation and networking opportunities among key Mission partners, Member States authorities, regions and communities for the implementation of the Mission;
- Support ocean and water literacy, citizen science and public and stakeholder mobilisation and engagement with regard to Mission activities.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: As of Q3 2025

Indicative budget: EUR 0.20 million from the 2025 budget

100 Climate-Neutral and Smart Cities by 2030

The Work Programme 2025 of the Climate-Neutral and Smart Cities Mission, in line with the [Implementation Plan of the Cities Mission](#), supports the implementation of the Mission by providing strong and direct support to cities committed to climate-neutrality, enabling them to implement their climate action plans and achieve climate-neutrality by 2030. The cities benefitting from these actions will act as experimentation and innovation hubs for other European cities aiming to become climate-neutral by 2050.

Cities' green and digital transformation with the aim of climate-neutrality is associated with important co-benefits and urban qualities such as reduced air and noise pollution, more sustainable mobility, improved health and well-being, reduced urban environmental footprints, enhanced urban greening, more efficient use of energy and infrastructures, as well as improved waste and water management. It also improves policy coherence across sectors and stimulates participatory and inclusive decision-making.

Therefore, in addition to a significant contribution to the objective of the [European Green Deal](#) to make Europe climate-neutral by 2050 at the latest, the supported actions will also contribute to the [UN Agenda 2030](#), the [Urban Agenda for the EU](#), the [New Leipzig Charter](#), the [Fit for 55 strategy](#), the [EU Industrial Strategy](#), the [Green Deal Industrial Plan](#) and the [Net-Zero Industry Act](#), the [EU Zero Pollution Action Plan](#), the [Circular Economy Action Plan](#), the [Smart and Sustainable Mobility Strategy](#) and the related new EU urban mobility framework, the [Biodiversity Strategy for 2030](#), [Europe's Digital Decade](#) and the [EU Strategy on adaptation to climate change](#).

The topics of the Work Programme 2025 reflect the cross-cutting nature of the Cities Mission and most of them have been designed as joint activities with other parts of the Horizon Europe programme, namely Clusters 4, 5, 6, other Missions, co-programmed partnerships, as well as in close coordination with other topics, such as one under the Ocean Mission (HORIZON-MISS-2025-03-OCEAN-05). The envisaged actions will aim at:

- Coupling circularity and climate mitigation in industrial sites and their cities and regions through a **joint action with the Circular Cities and Regions Initiative (CCRI)**;
- Innovative, AI-based solutions for urban planning and management through a **joint action with Horizon Europe Cluster 4**;
- Boosting the transformation towards climate-neutral cities, the net-zero economy and open strategic autonomy through Pre-Commercial Procurement (PCP);
- **Joint call “Cancer Mission – Cities Mission”**: Increasing the modal share of walking and cycling to reap health benefits and emission reductions and integrating active mobility and micro-mobility devices, with smart technologies and infrastructure.

Not listed in detail in this section of the Work Programme, but co-financed by the Cities Mission budget, is the following topic located in Cluster 5, Destination 5 under the transport-related health and environment part of the programme:

- **Joint topic “Zero-Emission Waterborne Transport (ZEWT) Partnership – Cities Mission”:** Real time monitoring of regulated and non-regulated emissions to enforce emission limits in waterfront cities.

Moreover, the prize “Renewable energy technology (RET) solutions in energy communities” in Cluster 5 under other actions, links to the Cities Mission. Energy communities can play a pivotal role in achieving climate neutrality at the city level. Embedding their activities in existing strategic and systematic approaches to climate neutrality in the city, such as the Climate City Contracts, will be weighted in the evaluation for the prize.

The operational capacity of the Mission Platform established through a Framework Partnership Agreement (HORIZON-MISS-2021-CIT-02-03) will be strengthened in order to: (1) reinforce activities aimed at supporting the implementation of the Climate City Contracts (CCCs) of the cities selected to participate in the Mission through the Call for Expression of Interest; (2) provide activities targeted at cities falling under the second objective of the Mission as well as cities that applied to the Call for Expression of Interest, committed to the climate-neutrality target by 2030 but were not eventually selected in the final list.

Support for financial advisory services to be provided to help cities implement their investment strategy for becoming climate-neutral will also be addressed under this Work Programme.

Proposals should demonstrate, as appropriate to their scope and size, how they internalise the principles of the Cities Mission, notably: (1) the contribution of the action to an overarching strategy aiming at climate-neutrality for cities, (2) the place of the action within a holistic and cross-sectoral approach to climate neutrality, and (3) diversity in terms of geographical location and size of cities.

Applicants are encouraged to show how their proposals take into account and build upon existing programmes and/or the results of previous R&I projects. Where applicable, they should consider the services offered by the EU-funded European Research Infrastructures¹⁹⁰; these services range from data sets in human behaviour to modelling or experimental techniques.

Strong synergies contributing to the implementation of the objectives of the Cities Mission is expected also from other relevant Horizon Europe partnerships such as the European Partnership for People-centric Sustainable Built Environment (Built4People) and on Driving Urban Transitions to a Sustainable Future (DUT). Topics under the Cities Mission Work Programme are also relevant for the Cancer Mission, in particular when addressing co-benefits generated by achieving climate-neutrality such as reduced pollution, improved health and wellbeing, increased active mobility contributing then to cancer prevention. Similarly, actions funded under the Cancer Mission focusing on behavioural change can contribute to the objectives of the Cities Mission especially when targeting actions at urban level. In addition, synergies are expected with the [Regional Innovation Valleys](#), which, in line with the

¹⁹⁰ ri-portfolio.esfri.eu/ri-portfolio/table/

[New European Innovation Agenda](#), bring together less and more innovative regions with a view to addressing the most burning challenges facing the EU, namely reducing the reliance on fossil fuels, increasing global food security, mastering the digital transformation (including cybersecurity), improving healthcare and achieving circularity. Moreover, strong synergies exist with the [LIFE Programme](#), a main EU funding instrument for environmental and climate action plans, particularly through its Climate Change Mitigation and Adaptation sub-programme, which aligns closely with the Cities Mission's objectives by supporting innovative efforts to reduce GHG emissions, enhance urban resilience, and promote climate change awareness.

Proposals should set out a credible pathway to contributing to the Climate-Neutral and Smart Cities Mission, and more specifically to one or several of the following impacts:

- Increased capacity among European cities, with particular attention to those selected under the Cities Mission, to implement their CCCs and to achieve climate-neutrality.
- Cities are taking action to increase energy and resource efficiency, promote circular economy, encourage urban regeneration and resilience, and they accelerate the uptake of innovative systemic solutions and clean tech in key areas (e.g., energy, mobility, construction, industry, spatial planning, environment, digitization, and data handling).
- Cities are engaging their citizens in the technologies developed and actions taken to achieve climate-neutrality, in order to guarantee acceptance, adherence and adoption, while paying particular attention to vulnerable groups.
- Cities are increasingly employing data and digital technologies to enhance decision-making, improve the efficiency of service delivery, and reduce emissions through open standards and shared technical specifications.
- Cities embrace innovative and inclusive cross-sectorial collaborative governance models, facilitating multi-level and multi-stakeholder engagement in decision-making and joint planning, as well as the CCC implementation in collaboration with citizens and local stakeholders.
- The CCCs identify and pool the demands of the cities in the Cities Mission across sectors, providing scalability and predictability for industry and investors, thus strengthening the competitiveness of European industry and SMEs.

Proposals are invited against the following topic(s):

HORIZON-MISS-2025-04-CIT-01: Coupling circularity and climate mitigation in industrial sites and their cities and regions

Call: Supporting the implementation of the Climate-Neutral and Smart Cities Mission
Specific conditions

Horizon Europe - Work Programme 2025
Missions

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 17.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <p>Activities must be deployed in at least three different ‘demonstration sites’ and at least three different ‘replication sites’¹⁹¹. Each of the demonstration and replication sites must be located in different Member States or Associated Countries.</p> <p>Related to each demonstration and replication site, beneficiaries must include the cities that host or are in the proximity of these sites, including at least one of the 112 cities selected for the EU Mission on Climate-Neutral and Smart Cities¹⁹². In addition, beneficiaries must also comprise at least another CCRI city, region or territorial cluster¹⁹³.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Grants awarded under this topic will be linked to the following action(s):</p> <p>HORIZON-MISS-2021-CIT-02-03</p> <p>Collaboration with the Cities Mission Platform¹⁹⁴ is essential and projects must ensure that appropriate provisions for activities and</p>

¹⁹¹ In this context, ‘demonstration sites’ possess experience and expertise in developing and integrating circularity and climate mitigation planning. ‘Replication sites’, on the other hand, are those with less experience in this area, aiming to replicate and build upon the successful approaches and best practices of demonstration sites.

¹⁹² The EU Mission on Climate-Neutral and Smart Cities aims to deliver 100 climate-neutral and smart cities by 2030 and ensure that these cities act as experimentation and innovation hubs to enable all European cities to follow suit by 2050. On 28 April 2022, the Commission announced the 100 EU cities that will participate in the Mission. In addition, 12 cities have been selected from countries associated or expected to be associated the Horizon Europe programme.

¹⁹³ As listed on the [CCRI Map | Circular Cities and Regions Initiative](#) (official website).

¹⁹⁴ Set up by Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, and scaled up through topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*.

	<p>resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Cities Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date.</p> <p>This action will also be part of the demonstration projects for the implementation of the European Commission's Circular Cities and Regions Initiative (CCRI) and must be carried out in close cooperation with it. This means that proposals must cooperate with CCRI and its Coordination and Support Office by means of sharing with this initiative knowledge and experiences developed during the project lifetime. Applicants must integrate explicitly these obligations into their proposal's work plan.</p>
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Expected Outcome: Projects are expected to contribute to all the following outcomes:

- Significant advances in climate mitigation and resource circularity, with associated reduction in pollution and waste, in industrial ecosystems at urban and peri-urban scale.
- Increased local and regional competitiveness and strengthened capacity for innovation of EU industries.
- Long-term change towards sustainable, flexible and responsive local and regional industrial ecosystems that connect key circular economy and climate mitigation stakeholders throughout planning, interventions and value chains.

Relevant indicators and metrics for the 2030 horizon, with baseline values, should be clearly stated in the proposal.

Scope: Climate mitigation and circularity are key building blocks for achieving industrial and urban futures that are climate-neutral and sustainable. While mitigation and circularity performance are typically modelled at the global or national level, a gap persists in action plans and practice at local level where the coupling of decarbonisation and circularity against the background of industrial-urban symbiosis and of the sharing economy (energy and materials) could yield significant ecological, economic and social benefits. There is therefore a pressing need to overcome the lack of coordination among industrial, circularity and urban activities and actors that yields sub-optimal outcomes in terms of climate mitigation, energy efficiency, resource use (including water), environmental pollution, material valorisation and waste reduction.

Proposals must involve at least three different demonstration sites and at least three replication sites. The consortia should involve key circular economy and mitigation actors from both local public authorities and industries in a certain region. Demonstration sites are expected to cover at least two different economic sectors, value chains and/or services.

Proposed projects should:

- Set up and deploy innovative governance and business models as well as ‘joint actions’¹⁹⁵ on climate mitigation¹⁹⁶ and circularity (such as circular supply models, collaborative consumption models, service system models, hire or leasing models, joint public procurements etc.) in the 3 demonstration sites as defined above.
- Assess and quantify the climate and other benefits of proposed joint mitigation and circularity actions including but not limited to: reduction of greenhouse gas emissions, pollution and water use; reduction of costs for secondary raw materials and waste management; new revenues generated from end-of-life and by-products, waste diversion from landfill and incineration; performance of mitigation infrastructure; industrial-urban symbiosis; creation of new business opportunities; development of green skills and strengthening of environmental profiles.
- Quantify and assess the co-benefits, constraints and trade-offs of coupling circularity and climate mitigation, considering social, economic and environmental aspects, as well as links with key sectors such as energy, buildings and transport. Complementary actions in terms of spatial planning (e.g. more sustainable and efficient uses of land and building stock), digitalisation and data enhancement should also be considered as appropriate.
- Define for each demonstration and replication site the strategies, processes and actions needed to underpin the climate-neutral and circular transition through a systemic, multi-sectoral multi-stakeholder approach. This should include the engagement of relevant stakeholders such as policymakers, research bodies and academia, the civil society and the private sector (industry, entrepreneurs, start-ups, SMEs etc).
- Based on the lessons learned, deliver guidelines and recommended approaches (including innovative methods) to integrate circularity in the cities’ mitigation strategies and vice versa.
- Implement activities to develop and secure long-term support from the national and regional public authorities, which may include the establishment of inter-institutional multi-level governance partnerships, the introduction of binding rules, regulations, subsidies and/or other economic incentives.

Proposals should plan for early financing follow-up by linking with the [Climate City Capital Hub](#) of the NetZeroCities Mission Platform and the Circular Cities and Regions Initiative financial advisory services (including the Horizon Europe funded [Project Development Assistance Projects](#) and the [European Investment Bank’s Circular City Centre](#)). This should serve to further scale-up and deploy at city/region scale the innovative activities/measures/business models through a combination of funding sources and financial instruments beyond the duration of the proposed action.

¹⁹⁵ In this context, the term ‘joint actions’ refers to actions that address both climate mitigation and circularity challenges.

¹⁹⁶ As defined in the Info Kit for Cities: [cb258381-77d5-435a-8b25-9a590795dc9e_en \(europa.eu\)](https://ec.europa.eu/info/kit-cities/circular-city-centre_en)

Proposals should envisage clustering activities with other projects selected under this topic, which could be in the form of cooperation, consultations as well as joint activities on cross-cutting issues such as sharing results, lessons learned and ways to address barriers and mitigate risks, joint communication, dissemination and capacity building activities, or assessing and evaluating impacts. Dedicated tasks with appropriately earmarked resources should be planned to this end. These tasks may also include collaboration with relevant CCRI-related projects¹⁹⁷ and relevant projects funded under the Cities Mission.

As part of the broader European Green Deal framework, proposals should link as relevant with the objectives of the new [Circular Economy Action Plan](#) of 2020¹⁹⁸ (that recognises the interlinkage between the circular economy and climate policies, presenting ‘circularity as a prerequisite for climate neutrality’) and the [Green Deal Industrial Plan](#) of 2023¹⁹⁹ (that, together with the [2020 Industrial Strategy](#)²⁰⁰ and its [2021 update](#)²⁰¹, sets the framework for the transformation of the EU’s industry for the net-zero age). Projects should also link as relevant with the objectives of the [Net Zero Industry Act](#)²⁰², the [Critical Raw Materials Act](#)²⁰³ and the [Clean Transition Dialogues](#)²⁰⁴ that highlight the importance of circularity in the green transition. In addition, actions should consider and promote synergies with pollution reduction measures, with reference to the [Zero Pollution Action Plan](#)²⁰⁵ and the [Industrial Emissions Directive](#)²⁰⁶. Synergies are expected with other relevant EU initiatives, such as the [Hubs for Circularity](#)²⁰⁷ and the [Regional Innovation Valleys](#)²⁰⁸, which foster industrial circularity hubs and support circularity transition at a local and regional level.

This action supports the follow-up to the July 2023 Communication on EU Missions assessment²⁰⁹.

HORIZON-MISS-2025-04-CIT-02: Innovative, AI-based solutions for urban planning and management

Call: Supporting the implementation of the Climate-Neutral and Smart Cities Mission
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Specific conditions

¹⁹⁷ List of [CCRI Projects | Circular Cities and Regions Initiative \(europa.eu\)](#)

¹⁹⁸ https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en

¹⁹⁹ COM(2023) 62 final

²⁰⁰ COM(2020) 102 final

²⁰¹ COM(2021) 350 final

²⁰² COM(2023) 161 final

²⁰³ COM(2023) 160 final

²⁰⁴ COM(2024) 163 final

²⁰⁵ https://environment.ec.europa.eu/strategy/zero-pollution-action-plan_en

²⁰⁶ https://environment.ec.europa.eu/topics/industrial-emissions-and-safety/industrial-emissions-directive_en

²⁰⁷ Set up under Horizon Europe, the [Hubs for Circularity](#) are first-of-a-kind, lighthouse demonstrator plants of near commercial size implementing industrial and/or urban industrial symbiosis, optimising the use of resources in energy-intensive industries and beyond.

²⁰⁸ The [Regional Innovation Valleys for Bioeconomy and Food Systems](#) contributes to the New European Innovation Agenda by building 100 regional deep-tech innovation valleys, fostering bioeconomy deployment, addressing the EU's innovation gap, and achieving circularity.

²⁰⁹ COM(2023) 457 final and SWD(2023) 260 final

Horizon Europe - Work Programme 2025
Missions

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 24.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following exceptions apply: subject to restrictions for the protection of European communication networks.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The following additional eligibility criteria apply:</p> <p>At least three cities, each from a different Member State or Associated Country, must participate as beneficiaries. At least one of the three cities must be one of the 112 cities selected for the EU Mission on Climate-neutral and Smart Cities²¹⁰.</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025)²¹¹.</p> <p>Grants awarded under this topic will be linked to the following action(s):</p>

²¹⁰ The EU Mission on Climate-Neutral and Smart Cities aims to deliver 100 climate-neutral and smart cities by 2030 and ensure that these cities act as experimentation and innovation hubs to enable all European cities to follow suit by 2050. On 28 April 2022, the Commission announced the 100 EU cities that will participate in the Mission. In addition, 12 cities have been selected from countries associated or expected to be associated the Horizon Europe programme.

²¹¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

	<p>HORIZON-MISS-2021-CIT-02-03</p> <p>Collaboration with the Cities Mission Platform²¹² is essential and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Cities Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date.</p>
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Expected Outcome: Projects are expected to contribute to the following outcomes:

- Digital Twin models with their associated tools, that use Artificial Intelligence (including generative AI), developed in line with the requirements defined in the scope, which are tested, calibrated, and implemented in each city participating in the proposal;
- Guidelines and recommended approaches on the integration and orchestration of developed models, applications and tools in urban planning and management and the subsequent decision-making process, considering synergies with the open sand-boxing infrastructure provided by the LDT-CitiVERSE-EDIC²¹³;
- Capacity building, for instance, making available software in relevant platforms (such as AI on Demand platform²¹⁴, open source, EU LTD toolbox, etc.), and peer learning for potential replication in other cities;
- Plans for the exploitation of the project result(s) through relevant Smart Cities networks specifically of the Digital Twins developed, including a market analysis for replicability and scalability of solutions;
- Visualisation component of the Digital Twin promoting participatory urban planning and management and facilitating communication between different stakeholders, while enabling citizens to provide well-informed feedback and solutions;
- Creation of multidisciplinary communities, bringing together IT developers, urban planners, designers, local authorities, and other relevant actors. This will facilitate future activities for adaptation, enhancement and integration of existing and future AI-based applications and solutions, including Digital Twins, applied in different urban domains (e.g. infrastructure planning, including nature-based solutions, urban logistics, network and traffic management, climate neutrality, safe and inclusive streets, health and wellbeing urban space, etc.). This could be achieved through synergies with the LDT-

²¹² Set up by Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, and scaled up through topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*.

²¹³ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202400459

²¹⁴ <https://www.ai4europe.eu/>

CitiVERSE-EDIC²¹⁵ and with other funded projects under this topic and under topics covering similar themes and aspects.

Scope: Urban planning and management require the analysis and integration of data ranging from zoning laws and buildings to overground infrastructure (street networks and their amenities, rail networks, etc.) and underground infrastructure (sewage, gas, electricity, heat, and water supply networks). Besides this complex physical urban fabric, urban planning and management cover intangible features such as administrative organisation, flows of goods and services, environmental determinants, demographic, social, and economic trends, evolving social values, behaviours, and local cultures.

Since the 1980-ties, Geographic Information Systems (GIS) integrating urban information within layers of data and translating them into tables, graphs, and maps, were introduced in urban planning with the purpose to allow a more efficient data collection, analysis, aggregation, and management, enabling planning and decision-making for increasingly sustainable and innovative cities. However, given the rapid digitalisation of almost every aspect of urban life and the increase in complexity and variety of data over the last decades, the field of Artificial Intelligence (AI) opens promising, new opportunities for embedding sustainability and climate-neutrality concepts in urban planning and management. AI-based applications (including generative AI) and tools such as machine learning (ML), neural networks (NNs), deep learning, autonomous systems, pattern recognition, simulation modelling – Digital Twins, Internet of Things (IoT), etc. can be harnessed to guide decision-making, predict trends, develop scenarios, optimize resource allocation, engage citizens, and further enhance and promote human creativity, inclusiveness and well-being in urban planning and design.

This topic explores the use and integration of AI-based applications and tools, particularly of Digital Twins, in urban planning and management.

Proposals should contain a comprehensive state-of-the-art of existing AI applications and tools for urban planning and management and evidence of relevant skills for the development of Digital Twins.

Proposals are invited to develop a Digital Twin model that complies with the following requirements:

- Integrates within the urban planning process and practice and supports the development of medium- and long-term strategic visions at city level for achieving a climate-neutral city.
- Supports decision-making and prioritization of policies and investment for sustainable, energy-efficient, and climate-neutral measures and solutions through visualization, prediction, diagnosis, assessment and prevention.

²¹⁵ <https://living-in.eu/news/ldt-citiverse-edic-fact>

- Incorporates static physical urban characteristics such as topography, buildings, overground, underground, blue-green infrastructures, energy and heat grid, also considering the EU buildings dataset from the EU_LDT toolbox and at least two of the following urban features as variables:
 - o Urban functions – zoning, land-use.
 - o Mobility modes and services, including freight transport and logistics.
 - o Energy generation and consumption, including energy generation from RES and energy storage infrastructure (e.g., heat grid).
 - o Weather forecast and reduction of pollutant emissions.
 - o Socio-demographic, economic and cultural trends.
- Provides different scenarios for achieving climate-neutrality as well as the possibility to simulate the impacts when prioritizing the implementation of specific policies, measures, or solutions for the other areas/sectors, and for the city as a whole. When defining climate-neutral scenarios, both forecasting and backcasting methodologies could be employed.
- Evaluates potential use cases, and assesses the potential of replication of developed Digital Twins, in other cities.
- Allows, using its flexible features, the estimation of the resources needed to implement the different projected scenarios.

Proposals should explore the development and use of Digital Twins that incorporate real-time monitoring and response, with the purpose to support city authorities, operators, service providers and citizens to strengthen city's resilience and its coping and response mechanisms when confronted with unexpected events or hazards.

Proposals should promote the possibility of joint policy coordination such as clustering activities guidelines, synergies from the start of the project.

The AI-based Digital Twin to be developed for each city could cover a city-wide area – the urban core but can extend as far as the functional urban areas with well-defined characteristics (in terms of morphology, density, socio-demographic and/or economic features)". The involved cities should promote complementarity in terms of climatic conditions, city typologies and geographical balance.

This topic requires proposals from consortia that include at least three cities, each from a different Member State or Associated Country, participating as beneficiaries. At least one of the three cities must be one of the 112 cities selected for the EU Mission on Climate-neutral and Smart Cities. The consortia should include local authorities, urban planners, IT developers, operators, service providers and other relevant actors to jointly develop, test and integrate Digital Twins in urban planning and management.

A demonstrated contribution to the implementation and delivery of the Climate City Contracts and/or Sustainable Energy Action Plans, Sustainable Energy and Climate Action Plans and/or Sustainable Mobility Plans is expected.

Synergies with the Driving Urban Transitions partnership²¹⁶ and the Urban Transitions Mission²¹⁷ under Mission Innovation, would be of added value, as well as synergies with the Local Digital Twin Toolbox that will be composed of open AI-based tools to foster the adoption of digital twins across rural and urban.

Proposals should also demonstrate that the proposed approaches and developed AI-Based applications and tools are built on the results from previous research and innovation actions funded under Horizon 2020 and Horizon Europe calls/topics. Moreover, proposals are encouraged to explore the support of the Digital Europe Programme and its EU Toolbox for Local Digital Twins helping cities to combine data from different domains. In the same context, actions to be funded under this topic could liaise with projects funded under the third call for proposals EUI-Innovative Actions²¹⁸, notably the topic “Technology in Cities”.

Proposals are encouraged to seek synergies, concerning the data collected and used, with the Common European Data Spaces²¹⁹, especially the Data Spaces that are relevant such as the EU Smart Communities Data Space, the mobility Data Space, Tourism Data Space, the Green Deal Data Space etc. To plan for interoperability and compatibility with the Common European Data Spaces, proposals are invited to consider engaging with the SIMPL project²²⁰. Proposals are invited to consult the Staff Working Document on the Common European Data Spaces²²¹.

Proposals are expected to demonstrate the robustness of the AI-based systems and/or techniques that will be used. For instance, they should be technically robust, reliable, and able to provide a suitable explanation of its decision-making process.

Proposers should demonstrate that appropriate security measures are in place to ensure that the data collected and used in the projects are secured from unauthorised access and cannot be used for purposes other than the project.

Data Management actions should be included in the Data Management Plan part of the proposals to ensure that data used in the Digital Twins are of good quality and data generated are well documented and can be reused in future projects.

Proposals should briefly describe the environmental footprint of the AI tools in the project. If the footprint is significant (e.g., at a scale that could raise questions on the usefulness of the project), a short cost-benefit analysis should be included in the proposal, along with corresponding mitigation actions that will be taken during the project. Finally, proposals are

²¹⁶ <https://dutpartnership.eu/>

²¹⁷ <https://mission-innovation.net/missions/urban-transitions-mission/>

²¹⁸ <https://www.urban-initiative.eu/calls-proposals/third-call-proposals-innovative-actions>

²¹⁹ <https://digital-strategy.ec.europa.eu/en/policies/data-spaces>

²²⁰ <https://simpl-programme.ec.europa.eu/>

²²¹ <https://digital-strategy.ec.europa.eu/en/library/staff-working-document-data-spaces>

expected to assess potential risks in the project and if relevant, describe solutions that mitigate those risks.

This action supports the follow-up to the July 2023 Communication on EU Missions assessment²²².

HORIZON-MISS-2026-04-PCP-CIT-01: Boosting the transformation towards climate-neutral cities, the net-zero economy and open strategic autonomy through Pre-Commercial Procurement (PCP)

Call: Supporting the implementation of the Climate-Neutral and Smart Cities Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 7.00 and 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 37.00 million.
<i>Type of Action</i>	Pre-commercial Procurement
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The specific conditions for actions with PCP/PPI procurements in section H of the General Annexes apply to grants funded under this topic.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>PCP/PPI procurement costs are eligible.</p> <p>Grants awarded under this topic will be linked to the following action(s):</p> <p>HORIZON-MISS-2021-CIT-02-03</p> <p>Collaboration with the Cities Mission Platform²²³ is essential and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Cities Mission Platform must be formalized through a Memorandum of Understanding to be</p>

²²² COM(2023) 457 final and SWD(2023) 260 final

²²³ Conceived through the Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, and scaled up through the topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*.

	<p>concluded as soon as possible after the project starting date.</p> <p>The Cities Mission Platform should in particular support cities with the preparatory work for the PCP and facilitate the upscaling as well as the replicability of the solutions that will be developed through the PCP²²⁴.</p> <p>The beneficiaries may provide financial support to third parties to provide financial incentives to final end-users to adopt the solutions. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 200 000 to ensure the deployment and impact of the project outcomes.</p>
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Expected Outcome: Projects are expected to contribute to the following outcomes:

- Public procurers stimulate from demand side the competitive development of market ready innovative solutions to reduce greenhouse gas emissions that can contribute to the transition of local communities towards climate neutrality, whilst strengthening EU open strategic autonomy;
- Public procurers leverage PCP to bring to the market innovative solutions in sectors relevant for climate change mitigation (such as energy efficiency in buildings, production and use of renewable energy, sustainable and smart mobility, digitalisation etc.) and implement those innovative solutions in the participant cities to reduce greenhouse gas emissions;
- Public procurers drive innovation and increase resilience in the supply chain by opening up opportunities for innovative companies established in the European Union's Member States and Horizon Europe Associated Countries, in particular SMEs and Startups, to access the public procurement market and scale up their business;
- Increased opportunities for wide market uptake and economies of scale for the supply side through increased demand for innovative solutions to reduce greenhouse gas emissions at the local level, wide publication of results and where relevant contribution to standardisation, regulation or certification;
- Present the expected greenhouse gas emission reduction in the participating cities by 2030 and 2050, in comparison to a baseline established at the beginning of the project.

Scope: By closing the gap between supply and demand in a way that reinforces EU open strategic autonomy, PCPs can make a key contribution to enhancing the European Union's economy and competitiveness²²⁵. In order to master the green and digital transition and make

²²⁴ Resources for this are foreseen under the *Specific Grant Agreements to the Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*.

²²⁵ General Annex H to the work programme provides for specific conditions for PCP such as place of performance and commercialisation conditions that can require the majority of the procured R&D activities and later commercialisation/production of developed solutions to take place in the European Union's Member States and Associated Countries, as well as the possibility to limit the participation to

our cities climate-neutral and liveable places, European public procurers need to lead by example by procuring more solutions to reduce greenhouse gas emissions. This topic therefore focuses on forward looking procurement of R&D to bring to the market new solutions to reduce greenhouse gas emissions that can increase Europe's resilience and preparedness to tackle the climate challenge.

On the road towards climate-neutral cities this topic addresses the lack and fragmentation of public demand for innovative solutions. Europe's companies, in particular SMEs and Startups, are indispensable in delivering the required innovations. As past experience shows that pre-commercial procurement opens up the procurement market for startups and enables the public sector to address societal challenges more effectively, public procurers should make more strategic use of PCP.

This topic supports public procurers, specifically local authorities, to collectively implement PCPs to drive innovation from the demand side and open up wider commercialisation opportunities for companies in Europe to take or maintain international leadership in new markets for net-zero technologies that can deliver solutions to reduce greenhouse gas emissions. The aim is to leverage PCP to encourage the development and to provide a first customer reference for the piloting, installation and validation of breakthrough innovations.

PCP actions target consortia of procurers with similar needs that want to procure together the development of innovative solutions to reduce greenhouse gas emissions in cities. This topic does not provide direct funding to developers, industry or research organisations to perform R&D. They will be able to respond to the call for tenders launched by consortia of procurers funded under this call. Specific guidance on PCP actions and minimum eligibility requirements can be found in General Annexes H of the Horizon Europe work programme.

Continuous dialogue between demand and supply side is required for the success of PCPs, therefore the effective involvement of end users (e.g. cities teams that would need to adopt climate mitigation solutions, regional structures cooperating with cities on climate mitigation, citizens etc.) needs to be considered in the proposal. Furthermore, to stimulate dialogue with the supply side, public procurers are required to organise an open market consultation before launching the procurement and to promote the call for tenders widely across Europe to potentially interested suppliers.

Proposals should demonstrate sustainability of the action beyond the life of the project. They should demonstrate how the project is anchored in a clear strategy to provide climate-neutral cities and enhance the economy in a sustainable way through stronger early adoption of innovative solutions to reduce greenhouse gas emissions. Activities covered should include cooperation with policy makers to reinforce the national policy frameworks and mobilise substantial additional national budgets for PCP and innovation procurement in general beyond the scope of the project.

the PCP procurement to economic operators that are established in the European Union's Member States and Associated Countries if there are sufficient economic operators in these territories that can develop the requested solutions. These conditions apply to this topic.

Involvement of procurement decision makers is needed to ensure that end solution(s) are adopted by local public buyers, increasing the societal impact of the related research activities. Therefore, procurers should declare in the proposal their interest to pursue deployment of solutions resulting from the PCP in case the PCP delivers successful solutions and indicate whether they will (1) procure successful solution(s) as part of the PCP, (2) launch a separate follow-up procurement after the PCP to buy such type of solutions, (3) adopt successful solutions without the need to procure them (e.g. in case of open source solutions), (4) foresee financial or regulatory incentives for others to adopt successful solutions (e.g. in case the final end-users of the solutions are not the procurers but for example citizens). In these four cases, the procurers can implement the project as a fast-track PCP (see general annex H). In the first case, the procurers must foresee the budget in the proposal to purchase at least one solution during the PCP. In the second case, the procurers should include in the proposal a deliverable that prepares the follow-up procurement to purchase such type of solution(s) after the PCP. In the first and third case, the procurers must foresee sufficient time during the project to deploy and validate that the solutions function well after installation. In the fourth case, the procurers can use financial support to third parties to provide financial incentives to final end-users to adopt the solutions, with a maximum budget of EUR 200 000. Projects funded under this topic, which target the higher end of the budget range, should demonstrate a greater degree of ambition in terms of innovation level and/or deployment scope. The selection of the third parties to be supported under the grant will be based on an external review by independent experts of the proposed work.

Projects funded under this topic should include at least three cities of the 112 selected ones for the EU Mission on Climate-Neutral and Smart Cities²²⁶, and the lead procurer from the buyers group should be one of these 112 cities. In addition to the buyers' group that will implement the PCP, projects are encouraged to actively cooperate with an additional group of follower cities in the preparation and follow up of the procurement, including possibly also in the testing of solutions, to smoothen faster uptake of solutions to the wider followers group. Collaboration amongst the projects financed under this topic and with the 'Climate-Neutral Smart cities' Mission Platform is essential to the increase impact and coherence of the action. Appropriate provisions for activities and resources aimed at enforcing this collaboration should be included in the work plan of the proposal. The Mission Platform will support cities with the preparatory work for the PCP. The Mission Platform will also support the upscaling and replicability of the developed solutions, and the monitoring of the impact of the projects using a common methodology and clearly established indicators. The collaboration with the Mission Platform must be formalised through a Memorandum of Understanding to be concluded as soon as possible after the project starting date. To ensure that the new solutions are appropriately identified, the projects should plan for liaising with the different other Horizon funded projects, partnerships and initiatives that promote innovation in the different

²²⁶ The EU Mission on Climate-Neutral and Smart Cities aims to deliver 100 climate-neutral and smart cities by 2030 and ensure that these cities act as experimentation and innovation hubs to enable all European cities to follow suit by 2050. On 28 April 2022, the Commission announced the 100 EU cities that will participate in the Mission. In addition, 12 cities have been selected from countries associated or expected to be associated the Horizon Europe programme.

domains (such as CCAM Partnership, 2ZERO Partnership, and Built4People Partnership, Circular Cities and Regions, and CIVITAS) to avoid overlaps or contradictory conclusions.

This action supports the follow-up to the July 2023 Communication on EU Missions assessment²²⁷.

100 Climate-Neutral and Smart Cities by 2030: Other Actions

1. Specific Grant Agreement to the FPA to reinforce the operations of the Climate-Neutral and Smart Cities Mission Platform

Within the Framework Partnership Agreement (FPA) awarded under topic HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform, the selected consortia will be invited to submit a proposal for a Research and Innovation Action that will contribute to the implementation of the last three years of the action plan defined in the above FPA.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- reinforcing services aimed at supporting the implementation of the Climate City Contracts (CCCs) of the cities selected to participate in the Mission through the Call for Expression of Interest;
- provision of basic services targeted at cities falling under the second objective of the Mission as well as cities that applied to the Call for Expression of Interest, committed to the climate-neutrality target by 2030 but were not eventually selected in the final list;
- Building on the good practices developed in the previous SGAs to support cities in the implementation of their investment plans through tailored advice and assistance offered by the **Climate City Capital Hub** and the **City Finance Specialists**. This activity will reinforce synergies between the Adaptation and Cities Missions, supporting cities in finding financing solutions for both mitigation as well as adaptation projects²²⁸;
- Assistance to cities with **innovative and strategic procurement**, including joint procurement with other cities, bridging with EU mechanisms and collaborating with national platforms on procurement, for example through regulatory sandboxes;
- Support for cities in **monitoring and reporting** on the implementation of the CCC;
- Expand and regularly update the **open-source services of the online platform**, accessible to all cities;
- Carry out a **capacity building and mutual learning programme**, supporting cities' move towards climate neutrality;

²²⁷ COM(2023) 457 final and SWD(2023) 260 final

²²⁸ For this purpose, the Adaptation Mission is financially contributing to the *Climate City Capital Hub*.

- Foster **mutual learning and exchange of good practice** through for instance mentoring and twinning actions;
- **Demonstrators accelerating and sustaining city climate-neutrality solutions**, building on the experience of activity 4 under the *Specific Grant Agreements to the FPA for the Climate-Neutral and Smart Cities Mission Platform* in the Work Programme 2021-2022. This support will enable Mission Cities to catalyse and sustain innovation and accelerate systemic change towards the objectives articulated in their CCC. In particular, it will support Mission Cities to anchor the resulting paradigm shift and embed transformative change over time towards the new normal of carbon neutrality.
 - o Launch and manage calls for proposals to support pilots for the deployment in participating Mission cities;
 - o Establish cooperation and regular exchange with the R&I projects that are and will be funded under the Climate-neutral and smart cities Mission Work Programme in order to identify complementarities, avoid potential overlaps with the pilots supported by the Mission Platform and ensure synergies where relevant, to the benefit of the participating cities. This collaboration should be formalised through a Memorandum of Understanding with the relevant projects and initiatives.

Expected Impact: Proposals should set out a credible pathway to contributing to:

- Supporting the implementation of the Climate-Neutral and Smart Cities Mission.
- Accelerating the transition towards climate-neutral cities.

Scope: This action aims at ensuring the Mission Platform's continued full operational capacity addressing and developing the actions needed to implement the relevant building blocks of the Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform while taking into account the lessons learned and the new priorities that emerged from the first few years of its implementation.

The Mission Platform will assist the cities that were selected²²⁹ as a result of the open Call for Expression of Interest which was launched in November 2021 and resulted in 377 expressions of interest from cities in all 27 EU Member States and from 9 associated countries. These cities respond to the first objective of the Mission to deliver at least 100 climate-neutral and smart European cities by 2030. Cities that are not yet able to commit to the Mission's timeline but are willing to commit to accelerate their transition towards climate neutrality within a longer timeframe following the Cities Mission basic principles, will also receive basic support from the Mission Platform. These cities respond to the second objective of the Mission to ensure that the cities responding to the first objective act as experimentation and innovation hubs to put all European cities in a position to become climate-neutral by 2050.

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https://ec.europa.eu/commission/presscorner/detail/en/IP_22_2591

The Mission Platform should build on existing actions, including relevant ones developed through Horizon 2020 and Horizon Europe projects. It should collaborate closely with successful ongoing initiatives that have developed knowledge and expertise, in particular with the Covenant of Mayors and their methodologies and processes co-developed with the JRC, and the Covenant Community Group of Cities Practitioners. The assets of the Smart Cities and Communities context (including Energy Communities and Living-in.eu, data space for smart communities), the Smart Cities Marketplace and the Common Services Platform should be factored in, with regard to engaging public, private and civil society stakeholders to support project financing and implementation as well as the promotion of shared standards and technical specifications to facilitate data exchange and to ensure interoperability of solutions. Synergies should be ensured with the European Urban Initiative of the Cohesion Policy and with the Urban Agenda for the EU and with actions funded under the DIGITAL European Programme.

The Mission Platform will coordinate with the European Commission to ensure that advice and support provided to cities remains aligned to the latest policies and initiatives and makes full use of available tools and services provided or supported by the Commission.

In addition, it will draw in national-level support and expertise through close cooperation with the Cities Mission's national networks, established under the calls HORIZON-MISS-2021-CIT-01-01 and HORIZON-MISS-2024-CIT-02-01.

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

This action supports the follow-up to the July 2023 Communication on EU Missions assessment²³⁰.

Specific conditions:

The evaluation committee will be partially composed by representatives of EU institutions.

This action allows for the provision of financial support to third parties in line with the conditions set out in General Annex B – Eligibility of the Horizon Europe Work Programme. The activity "Demonstrators accelerating and sustaining city climate-neutrality solutions", includes the launch of open calls for proposals to support pilots for the deployment in participating Mission cities of systemic innovative solutions. For this purpose, beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 1.5 million to increase the impact of the pilot projects to be supported under the call(s) that will address the deployment of systemic innovative solutions and in order to achieve the objectives of this action. The Commission considers that the size of the pilots should range between EUR 0.5 million up to EUR 1.5 million, depending on the expected impact of the

²³⁰ COM(2023) 457 final and SWD(2023) 260 final

proposed projects. The selection of the third parties to be supported under the grant will be based on a review of the proposed work by external independent experts. The scope of these calls will be further defined building on and ensuring complementarities with similar initiatives developed by the projects funded under the Horizon 2020 Green Deal call topic LC-GD-1-2-2020: Towards climate-neutral and socially innovative cities²³¹ as well as the projects funded under the *Specific Grant Agreements to the FPA for the Climate-Neutral and Smart Cities Mission Platform* in the Horizon Europe Missions Work Programme 2021-2022.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Specific grant agreement awarded without call for proposals in relation to a Framework Partnership Agreement

Indicative timetable: Third quarter 2025

Indicative budget: EUR 30.64 million from the 2025 budget

2. Financial advisory services and technical assistance to Mission cities

This action aims at supporting the provision of financial advisory services and technical assistance to the 112 cities selected as part of the Climate-neutral and smart cities Mission through its Call for Expression of Interest with the objective to develop and subsequently implement their investment strategy for becoming climate-neutral. Through a top-up of existing activities and advisory structures such as the European Local Energy Assistance (ELENA), Mission cities will receive targeted support including e.g. technical studies, energy audits, business plans and financial advisory, legal advice, tendering procedure preparation, project bundling, project management.

The action will be implemented through the existing advisory agreement with the EIB Group for the implementation of the InvestEU Advisory Hub.

This action supports the follow-up to the July 2023 Communication on EU Missions assessment²³².

Legal entities:

EIB, 98-100, boulevard Konrad Adenauer L-2950 Luxembourg

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

²³¹ Horizon 2020 Work Programme 2018-2020, Part 20. Cross-cutting activities, Call - Building a low-carbon, climate resilient future: Research and innovation in support of the European Green Deal: <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/lc-gd-1-2-2020>. The Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, has been selected under the Green Deal call topic "LC-GD-1-2-2020 Towards Climate-Neutral and Socially Innovative Cities" and started its activities on 1 October 2021.

²³² COM(2023) 457 final and SWD(2023) 260 final

Indicative timetable: Third quarter 2025

Indicative budget: EUR 18.65 million from the 2025 budget

DRAFT

A Soil Deal for Europe: Research and Innovation and other actions to support the implementation of Mission 'A Soil Deal for Europe'

As part of the vision to achieve healthy soils by 2050, outlined in the [EU soil strategy for 2030](#), the European Commission proposed a [Directive on Soil Monitoring and Resilience](#), addressing key threats such as erosion, floods and landslides, loss of soil organic matter, salinisation, contamination, compaction, sealing, and loss of soil biodiversity. **The Mission 'A Soil Deal for Europe', the Mission, is recognized as a key instrument for its implementation**, aiming to establish [100 living labs and lighthouses](#) by 2030.

The **Mission** is structured around **four operational objectives**:

- build capacities and the knowledge base for soil stewardship;
- co-create and upscale place-based innovations to improve soil health in all places;
- develop an integrated EU soil monitoring system and track progress towards soil health;
- engage with the soil user community and society at large.

Significant investments via the 2021-2024 Work Programmes have advanced the Mission's objectives, establishing a solid infrastructure to support its projects and objectives. This has led to major progress in the EU soil health monitoring framework, with data and knowledge from Mission projects feeding into the [EU Soil Observatory and the European Soil Data Centre](#) (ESDAC), aiding Member States in implementing the future Directive. The first [EU-wide soil health observatory dashboard](#), launched in March 2023, provides 19 key soil health parameters and maps degradation processes across Europe. Efforts continue to develop cost-effective indicators and methodologies for monitoring soil health at local, regional, and EU levels, leveraging digital and earth observation technologies.

The Mission is empowering a vibrant community of key actors to take action on soils, including researchers, innovators, land managers²³³, advisors, educators, artists, citizens, industry, policymakers and representatives of national, regional and local administrations. Noteworthy is the [Mission Manifesto](#), which has mobilized widespread support across the EU and beyond, with numerous organizations and individuals pledging their commitment to protecting and restoring soil health. Recognizing soil health as a global challenge, the Mission has supported key soil initiatives worldwide and contributes to EU policies and international commitments (e.g., Sustainable Development Goals, United Nations Convention to Combat Desertification, United Nations Convention on Biodiversity, the Long-term Vision for the EU's rural areas and the Common Agricultural Policy).

The **2025 Work Programme** builds on, consolidates and completes the actions initiated in previous programmes.

²³³ The term "land manager" includes farmers, foresters, urban and spatial planners and other decision-makers in the public or private domain with regard to land use and rural areas.

Potential applicants should prepare their proposals considering the aim of the [EU Missions](#) as an instrument, i.e., to bring concrete solutions to the great challenges identified and to deliver results by 2030, and specifically the Mission Soil objectives ([Mission Implementation Plan](#)) and state of play. Proposals for topics under the Mission “A Soil Deal for Europe” Work Programme 2025 should outline credible pathways to contribute to at least one of the three key strategic orientations of the [Strategic Plan 2025-2027](#), and more specifically, to the following long-term impacts:

- Soil health-improving innovative governance, policies, practices, and incentives that integrate the main environmental, social, economic, regulatory, and cultural factors influencing soil management and soil degradation are in place, particularly at regional and local levels.
- Improved and coherent soil health monitoring is adopted by land managers, including farmers and foresters, researchers, and Member States, within and beyond the EU using cost-efficient techniques that harness the potential of remote sensing and digital technologies.
- Researchers, land managers, policymakers, and citizens are aware of soil health issues in the EU and AC, and beyond, and engaged in the design of solutions to protect and restore soil health.

Coordinated contributions to the Mission’s long-term impacts and relevant Mission objectives will be key for the Mission success. Sharing data, knowledge and information, creating synergies and collaborations and avoiding duplications between projects is essential, as well as considering mobilising other resources and actors where relevant and possible. Proposals are therefore encouraged to **build on and collaborate with ongoing Mission projects** and support structures and projects such as [SoilWise](#) and the [Mission Soil Platform](#). Projects are also expected to liaise closely with the **Mission Secretariat** and actively contribute to the development of the **European Soil Observatory (EUSO)**, hosted by the European Commission’s Joint Research Centre (JRC).

Finally, to ensure EU-wide communication in all areas related to the [Common Agricultural Policy \(CAP\) specific objectives](#), in particular agriculture, forestry and rural development, this knowledge must also be summarised in an appropriate number of ‘practice abstracts’ in the common [EIP-AGRI format](#). Where applicable, involvement of interactive innovation groups, such as [EIP-AGRI Operational Groups](#) funded under Rural Development Programmes, is strongly recommended. For areas falling outside the [EU CAP Network](#) and CAP specific objectives remit, other similarly effective solutions ensuring dissemination and interaction with innovation groups at EU level should be sought.

Specific requirements for multi-actor projects:

The multi-actor approach described here, which is a form of responsible research and innovation, aims to make the research and innovation process and its outcomes more reliable, demand-driven, shared and relevant to society. A multi-actor project ensures the genuine and

sufficient involvement of a targeted array of actors. For instance, actors could include but not be limited to researchers, farmers, foresters and representatives of their professional associations, advisors, land managers and owners, spatial planners, food and bioeconomy businesses, consumer associations, local communities, educators, cultural and creative industries, citizens, civil society organizations including NGOs, and government representatives. The choice of the key actors participating in projects will depend on the objectives of the topic and the proposal. The genuine and sufficient involvement of different actors (essentially the (end-) users²³⁴ of the project results backed up by any other useful intermediaries and actors who can contribute with further expertise and innovative ideas) should take place over the whole course of the project: from its inception and planning to implementation, dissemination and possibly exploitation of results. The building blocks of a proposal are expected to come from science as well as from practice in a ‘co-creation’ process. (End-) users and practitioners are to be involved, not as a study-object, but to use their practical and local knowledge and/or entrepreneurial skills to develop solutions and create ‘co-ownership’ of results. This will contribute and speed up the acceptance and up-take of new ideas, approaches, and solutions developed in the project. Proposals submitted for topics requesting to follow the multi-actor approach should describe:

- How the proposed objectives and planned activities are targeting the needs/problems/challenges and opportunities of the (end-)users.
- How the proposed approaches and in particular the composition of the consortium reflects a balanced choice of relevant key actors who have complementary types of knowledge (scientific, practical etc.), and will ensure the delivery of results ready for practice.
- How existing practices and tacit knowledge will be included. This should be illustrated in the proposals with a sufficient number of high-quality knowledge exchange activities indicating the precise and active roles of the different non-scientific actors in the work. The cross-fertilisation of skills, competencies and ideas between actors should generate innovative findings and solutions that are more likely to be applied on a broad scale.
- How the multi-actor engagement process will be facilitated by making use of the most appropriate methods and expertise.
- How practical and ready to use knowledge, approaches, tools or products, that are easily understandable and freely accessible, will be developed.

How results and outputs ready for practice will feed into the existing dissemination channels most consulted by (end-) users across countries and regions.

Proposals are invited against the following topic(s):

²³⁴ An “(end-) user” of project result is a person who is him/herself putting the project results into practice.

HORIZON-MISS-2025-05-SOIL-01: Living Labs for soil remediation and green redevelopment of brownfields

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 12.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The overall threshold for the second stage evaluation will be 12, with a minimum threshold of 4 for the ‘Excellence’ criterion’.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties to facilitate active involvement of smaller actors (e.g. land managers and owners such as farmers, SMEs or civil society) in one or more of the living labs of the project. The support to third parties can only be provided in the form of grants (further to calls or, if duly justified, without a call for proposals). The maximum amount to be granted to each third party is EUR 200 000.</p>

Expected Outcome: Activities under this topic respond directly to the goal of the Mission ‘[A Soil Deal for Europe](#)’ of setting up 100 living labs and lighthouses by 2027 to lead the transition to healthy soils by 2030. They support the specific objectives of the Mission Soil dealing with urgent soil health challenges (see in particular specific objectives 3, 4, 6 and 8 in the [Mission implementation plan](#)).

Activities should also contribute to meeting the European Green Deal ambitions and targets and more specifically those of the [EU soil strategy for 2030](#) and the [EU Biodiversity Strategy for 2030](#), the [Zero Pollution Action Plan](#), the [Roadmap to a Resource Efficient Europe](#), [the proposal for a Soil Monitoring and Resilience Directive](#), the [Communication on Boosting](#)

[Biotechnology and Biomanufacturing in the EU](#) as well as to Sustainable Development Goal (SDG) 15 on Life on land and SDG 3 on Good health and well-being.

Project results are expected to contribute to the following outcomes:

- Increased capacities for participatory, interdisciplinary and transdisciplinary R&I to co-create, and co-implement economically viable solutions for soil remediation and green redevelopment of brownfields.
- Practice-oriented knowledge and tools are more easily available to land managers and land users resulting in an enhanced consideration and uptake of effective solutions for soil remediation and green redevelopment of brownfields.
- Policymakers are more aware of local needs regarding soil remediation and green redevelopment of brownfields, including the economic sustainability of solutions and use this knowledge to design and implement more effective policies.

Scope: De-industrialisation and abandonment of areas previously developed for industrial or commercial purposes have produced many brownfields²³⁵ all over Europe, representing a major concern at different levels with adverse effects on the economy the environment, human health, social well-being and quality of life in their surroundings. However, many brownfields are located within urban boundaries and as such represent an opportunity for sustainable urban regeneration initiatives and offer competitive alternatives to greenfield developments (in line with the New European Bauhaus initiative).

Projects under this topic are intended to expand and complement the network of Mission Soil living labs and lighthouses initiated with projects funded under Work Programmes 2023 and 2024 of the Mission Soil, with the aim of gradually establishing 100 living labs and lighthouses to lead the transition towards healthy soils by 2030.

The Mission ‘A Soil Deal for Europe’ proposes a novel approach to research and innovation in the area of soil health, including the implementation of living labs. Living labs have the potential to facilitate a green and fair transition by involving multiple actors in real-life sites within a local/regional setting to co-create soil health solutions and achieve large-scale impacts on soil health and soil governance.

Living labs are long-term collaborations between multiple actors to address common soil health challenges in real-life sites at local or regional level (10 to 20 sites in each living lab). Depending on the level at which each living lab operates and the specific context (e.g. land use covered or soil health challenge addressed), applicants can exceptionally propose living labs with fewer sites. Individual sites could be e.g. abandoned commercial and industrial sites, former mining areas or zones with former or current military activities. Sites that are exemplary in their performance in terms of soil health improvement and serve as places for

²³⁵ According to the US Environmental Protection Agency, brownfields are properties that contain or may contain a hazardous substance, pollutant or contaminant, complicating efforts to expand, redevelop or reuse them.

demonstration of solutions, training and communication are lighthouses. Lighthouse sites can be part of a living lab or be situated outside a living lab.

Living labs can address soil health challenges in or across different land uses (agricultural, (peri-)urban, (post)-industrial, forest and (semi-)natural). Projects funded under this topic are expected to kick-start participatory process or build on existing ones. While normally projects run for four years, the duration of the projects should accommodate longer timescales required to establish participatory processes and/or for soils processes to take place. Actors working on common shared soil health challenges within and across the living labs of the same project, will be able to compare results, exchange good practices, validate methodologies, replicate actions and solutions and benefit from cross-fertilisation, thereby accelerating the transition towards the shared objective of improving soil health.

More specifically, the proposals should:

- Support the setup of four to five living labs to work together on soil remediation solutions (practices, tools, strategies, etc.) and green redevelopment of brownfields. The living labs should be located in at least three different Member States and/or Associated Countries. Proposals should explain the rationale and mechanisms for cooperation across the living labs and explain how the work undertaken will contribute to one or more of the Mission's specific objectives²³⁶. Proposals should present a realistic combination of a limited selection of variables which should be clearly described (e.g., number of soil health challenges addressed, pedo-climatic conditions, land uses, Mission objectives addressed).
- Establish an interdisciplinary, participatory, and multi-actor approach in the living labs to co-design, co-develop and co-implement locally adapted solutions for the common soil health challenge(s), taking into account relevant drivers and pressures. Proposed solutions should be adapted to the different environmental, socio-economic and cultural contexts in which the living labs are operating.
- Establish for each living lab a baseline for the relevant soil descriptors/indicators adequate for brownfields, to allow for an accurate co-assessment of the changes in different sites over time. The set of soil health indicators/descriptors presented in the proposal for a [Directive on Soil Monitoring and Resilience](#) should be used as a basis; proposals may complement with additional indicators depending on the soil health challenge(s) addressed, pedoclimatic conditions, land use, etc.
- Propose and assess innovative solutions for soil remediation and potential green redevelopment plans for the sites (brownfields) involved in the living labs that would enhance soil health and related ecosystem services. This should include a demonstration of the viability (technical, social, economic, cultural and environmental) of the solutions.

²³⁶ See the [Mission implementation plan](#)

- Identify sites that demonstrate high performance in terms of their actions and results on soil remediation and green redevelopment of brownfields, and that may be converted into lighthouses. This can be performed both at proposal stage or later on, during the living lab operation.
- Propose strategies (e.g., financial, organisational) to ensure the long-term sustainability of the established living labs beyond the Horizon Europe funding. Strategies should include the identification of possible business models and actions, involving a mix of public or private funding schemes, financial instruments, cooperation with local authorities, engagement of social economy entities, social enterprises, business communities, SMEs, as well as attracting investors and entrepreneurs.

In line with the nature of living labs, projects must adopt the multi-actor approach. The actors involved in each living lab may vary based on its unique characteristics, and may include, among others, researchers, landowners or land managers, industry representatives (e.g. SMEs), public administrators and civil society (e.g. consumers, local residents, environmental NGOs, youth organisations). Care should be taken to describe the capabilities, roles and resources of the different actors involved in the living labs. An effective contribution of social sciences and humanities and the arts (SSHA) is expected to foster social innovation, knowledge transfer and socio-cultural and behavioural change.

To encourage and facilitate the involvement of different types of actors in the living labs, applicants are reminded of the different types of participation possible in a project under Horizon Europe. This includes not only beneficiaries (or their affiliated entities) but also associated partners, third parties giving in-kind contributions, subcontractors and recipients of financial support to third parties²³⁷. Financial support to third parties (FSTP) to facilitate active involvement of small actors (e.g. land managers, landowners, SMEs or civil society) in one or more of the living labs of a project, can be provided through calls or, if duly justified, without a call for proposals. Applicants are advised to consult the standard conditions set out in Annex B of the General Annexes including those that apply to FSTP.

Dedicated tasks and appropriate resources should be envisioned to collaborate with [SOILL](#), the structure created to support soil health living labs and lighthouses which offers significant capacity building opportunities for the living labs actors. Applicants can benefit from the services of [SOILL](#) already during the proposal preparation stage. During implementation, collaboration will include, among others, regular reporting of living labs performance. The details of the collaboration will be further defined during the grant agreement preparation phase.

Proposals are expected to build on existing knowledge (e.g. data from national soil health monitoring, LUCAS) and solutions developed and tested at national scale or in the frame of other Horizon projects including those funded under the Mission ‘A Soil Deal for Europe’.

²³⁷ To explore the full range of options including what type of costs and activities are eligible to be funded under Horizon Europe, applicants should refer to the AGA – Annotated Model Grant Agreement https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf

Proposals should therefore include dedicated tasks and appropriate resources for collaboration with relevant projects and initiatives and engage in relevant Mission Soil clustering activities. Proposals are also encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures ([ESFRI](#)) and if relevant to cooperate with the Horizon Europe Partnerships on [Agroecology](#) and on [Sustainable Food Systems](#) and/or relevant networks active at local level, such as the EIP-AGRI operational groups to promote the involvement of key local stakeholders.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the [EU Soil Observatory](#) (EUSO) and the project [SoilWise](#). In particular, proposals should ensure that relevant data, maps and information can potentially be available publicly through the EUSO maps and information can potentially be available publicly through the EUSO. Concrete efforts should be made to ensure that the data produced in the context of the funded project is FAIR (Findable, Accessible, Interoperable and Re-usable).

HORIZON-MISS-2025-05-SOIL-02: Social, economic and cultural drivers, and costs of land degradation

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 11.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²³⁸ .

²³⁸ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Expected Outcome: Activities under this topic will help to progress EU efforts to better protect soils and reaffirm its commitment to achieve land-based climate neutrality in the EU by 2035 as outlined in the [EU Soil Strategy for 2030](#). Moreover, results under this topic will contribute to progress on all the Mission ‘A Soil Deal for Europe’ objectives as well as on the Sustainable Development Goal (SDG) 15 on Life on land.

Project results are expected to contribute to all the following outcomes:

- Policy makers and relevant stakeholders have an enhanced understanding of the key social, economic, cultural, political, and regulatory factors driving soil management and degradation and the interaction of these factors.
- Policy makers and other relevant stakeholders have access to enhanced estimates of land degradation costs (e.g., GDP losses and negative externalities) and have a better understanding of the consequences of land degradation for food security and other ecosystem services, people’s well-being, markets and finance.
- Policy makers (at EU, national, regional and local level), land-managers, and other stakeholders have increased access to cost-benefit analysis and have improved capacities to develop evidence-based strategies or policies, and integrated approaches to overcome barriers to soil health protection and restoration and facilitate sustainable land management.

Scope: The social, economic, cultural, political, and regulatory factors that drive land management and land degradation and the interaction among these factors has been insufficiently explored. Moreover, there is a knowledge gap in estimating the costs that land degradation generates on-site, directly affecting land users and managers, and offsite, borne by society. Currently, the lack of knowledge on the costs of land degradation hampers the development of cost-benefit scenarios for the adoption and implementation of soil conservation and restoration actions across the EU and Associated Countries. An improved understanding of the social, economic, political, regulatory, and cultural factors, together with quantification of the costs of land degradation, should lead to evidence-based strategies, policies and integrated approaches that support land managers in rural, intermediate, and urban areas to adopt and implement sustainable land management practices that reduce and eventually stop land degradation and enhance soil health.

Proposed activities should:

- Identify the social, economic, cultural, political, and regulatory factors that drive soil management and degradation and are key in the development of strategies, policies and integrated approaches for sustainable land management across different land uses. The analysis should include, among other factors, those related to gender, education, inequalities, and access to land.
- Review existing socio-economic methods and models for assessing land degradation costs and conduct pan-European assessments of the socio-economic costs of different

aspects of land degradation (e.g. soil organic carbon losses, soil erosion, biodiversity decline, nutrient loss, soil contamination, soil sealing, and land subsidence) across all relevant land use types. Such assessments should be based on the integration of soil bio-physico-chemical indicators with socio-economic methods and models.

- Carry out cost-benefit analyses of soil conservation measures and sustainable land management approaches by building on other EU funded projects or initiatives.
- Evaluate the socio-economic impacts of EU Green Deal policies related to land degradation (scenario analysis) and the socio-economic costs and benefits of their implementation.
- Explore how existing patterns of thought and action can be modified to implement sustainable land management. This should include the analysis of successful examples of sustainable human-soil relations, and their replicability should be encouraged among stakeholders through peer-to-peer learning and capacity building.
- Develop a toolbox of policy solutions for different governance levels to promote sustainable land management and avoid land degradation and sealing, considering the diverse cultural, political, and administrative systems, land uses, and geographical and pedo-climatic conditions in the EU and Associated Countries.

In carrying out the activities, consortia should:

- Work in an interdisciplinary way bringing together environmental sciences and social sciences and humanities (SSH) disciplines (including economics, political science, sociology, history, geography, cultural anthropology, behavioural sciences).
- Regularly engage with policy makers and stakeholders to co-create and evaluate strategies to mitigate land degradation and sealing.

Finally, proposals should:

- Include dedicated tasks and appropriate resources for coordination measures and joint activities with the other project funded under this topic, as well as with other relevant projects and initiatives funded under the Mission “A Soil Deal for Europe”, including engagement with the relevant cluster activities.
- Demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the [EU Soil Observatory](#) and the [SoilWise](#)²³⁹ project.

²³⁹ See [An open access knowledge and data repository to safeguard soils | SoilWise | Project | Fact sheet | HORIZON | CORDIS | European Commission](#)

HORIZON-MISS-2025-05-SOIL-03: Increasing environmental resilience through a better knowledge and management of the soil-water nexus

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).²⁴⁰.</p>

Expected Outcome: Activities under this topic will help to progress towards the objectives of the Mission ‘A Soil Deal for Europe’. Activities will also contribute to the EU Biodiversity Strategy for 2030 and the Nature Restoration Law, to the EU Soil Strategy for 2030 and the proposed Soil Monitoring and Resilience Directive, EU Water Framework Directive, as well as the EU Action Plan on the Development of Organic Production.

Project results are expected to significantly contribute to all the following outcomes:

- Enhance stakeholders’ (including decision-makers’ and land managers’) understanding of the importance that soil-water interactions play in mitigating risks associated with extreme events such as droughts, wildfires and floods and their virulence.
- Raise stakeholders’ awareness of the relevance of soil biodiversity²⁴¹ to soil characteristics (e.g. water retention capacity, permeability, saturation, etc.) which are relevant for the soil-water nexus.

²⁴⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁴¹ See [Soil Biodiversity - ESDAC - European Commission](#)

- Substantially contribute to increasing environmental resilience to extreme events like floods, droughts, or wildfires, as well as to other undesired soil health processes, through restoration, conservation and integrated management of the soil-water nexus.

Scope: The world is facing an increasing trend in the frequency and virulence of extreme events like droughts, wildfires, and floods, with soil, and more precisely soil-water interactions, playing a key role in their occurrence and impact. A holistic response is necessary to face these events and better manage the risks and impacts they create onto the environment, food security, the economy and human security.

For example, recent studies have shown the significance of soil moisture in wildfire probability and virulence²⁴², the importance of soil-water retention capacity and availability for vegetation and crop possibilities to endure droughts, and the potential for improved retention and infiltration to reduce flood peak flow and its destructive effects²⁴³. Soils, sediments, and water are intimately connected, as soils filter, absorb and buffer water, but can also get eroded and contaminated through water. Healthy soils can help mitigate not only the occurrence, virulence and scope of extreme events, but also other undesired processes like erosion or contamination. But when soils are unhealthy, compacted or sealed, they lose capacity to absorb and store water, which reduces their capability to mitigate the risks and impacts of extreme events.

While soil biodiversity plays an important role with respect to soil properties such as porosity, aggregation or organic matter content, its influence on water dynamics is often complex and indirect, and thus still poorly studied. Therefore, it is necessary to enhance the understanding of the functional role of soil biodiversity for soil-water dynamics, and to develop and validate new models for mainstreaming and integrating soil biodiversity together with other risk assessment parameters.

Proposed activities should:

- Develop and validate one or more indicators for the soil water holding capacity descriptor included in the proposed Soil Monitoring Law, considering the different pedoclimatic areas and land uses in the EU and Associated Countries.
- Identify the soil properties and associated indicators (e.g., structure, bulk density, porosity, depth, organic matter, buffering etc.) and factors (e.g., slope, frost, cover, drainage network, etc.) that determine soil-water dynamics and are relevant for the probability and virulence of extreme events. The use of remote sensing techniques is encouraged for soil factors identification.
- Assess the role of soil biodiversity for the previously identified water-relevant soil properties and the impact of the different soil factors on soil biodiversity, considering

²⁴² See [Measured Soil Moisture is a Better Predictor of Large Growing-Season Wildfires than the Keetch–Byram Drought Index](#); [Satellite-Observed Soil Moisture as an Indicator of Wildfire Risk](#); [Evaluation and calibration of a high-resolution soil moisture product for wildfire prediction and management](#)

²⁴³ See [Building Resilience Against Drought and Floods: The Soil-Water Management Perspective](#)

different pedoclimatic areas and land uses in the EU and Associated Countries. Where relevant, involve soil biodiversity taxonomists to validate methods and expand knowledge.

- Develop and validate new models (or substantially improve existing ones) at watershed/landscape level that mainstream and integrate the functional role of soil biodiversity in soil-water interactions and specially in risk assessment of extreme events.
- Assess and validate strategies and best practices proposed in the context of other relevant EU-funded projects and initiatives (e.g. Living Labs funded under the EU Mission “A Soil Deal for Europe”²⁴⁴ or the Horizon Europe projects [SpongeBoost](#) and [SpongeScapes](#)) to increase environmental resilience by improving the soil-water nexus through restoration, conservation and management of soil and its biodiversity, considering the different pedoclimatic areas and land uses in the EU and Associated Countries.

The proposed activities should duly consider the different pedoclimatic areas and land uses (agricultural, natural, and urban) across the EU and Associated Countries, with enough experiment design robustness to guarantee the meaningfulness of results. In the specific case of agricultural lands, due attention should be given to the impact of the differences between conventional, agroecological and organic production.

Proposals should include dedicated tasks and appropriate resources for coordination measures and joint activities with other relevant EU-funded initiatives, specially under the Mission ‘A Soil Deal for Europe’, in particular for the validation of innovative approaches for increasing environmental resilience, and for engagement with the relevant cluster activities.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the [EU Soil Observatory](#) (EUSO) and [SoilWise](#). Concrete efforts should be made to ensure that the data produced in the context of the funded project is FAIR (Findable, Accessible, Interoperable and Re-usable), particularly in the context of real-time data feeds, exploring workflows that can provide “FAIR-by-design” data, i.e., data that is FAIR from its generation.

When dealing with models, actions should promote the highest standards of transparency and openness, as much as possible going well beyond documentation and extending to aspects such as assumptions, protocols, code and data, that is managed in compliance with the previously mentioned FAIR principles.

Proposals are encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures in the environment, biological & food domains or imaging capacities²⁴⁵.

²⁴⁴ See <https://mission-soil-platform.ec.europa.eu/>

²⁴⁵ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

HORIZON-MISS-2025-05-SOIL-04: Developing transfer functions for the Soil Monitoring Law

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome: Activities under this topic will help to progress towards the objectives of the Mission ‘A Soil Deal for Europe’ and the proposed Directive on Soil Monitoring and Resilience (Soil Monitoring Law – SML)²⁴⁶, by integrating different soil monitoring systems for a harmonised soil health assessment in the EU. It will also support the implementation of the EU Carbon Removal and Carbon Farming (CRCF) Regulation²⁴⁷ by facilitating the interoperability of soil organic carbon data across the EU and thus harmonising the production and use of soil datasheets for monitoring, reporting and verification in carbon farming, including statistics and maps.

Project results are expected to significantly contribute to all the following outcomes:

- Stakeholders have access to validated transfer functions for all soil descriptors included in the SML proposal, enabling compatibility, interoperability, and comparability of data for laboratorial and field methods used in the EU that differ from those prescribed in Annex II of the proposal.
- National monitoring programmes, Land Use and Coverage Area frame Survey (LUCAS) and protocols (e.g. ISO/CEN) included in the SML proposal are integrated by interoperability, enabling harmonised soil health assessments across the EU by using the existing monitoring schemes in Member States and at EU level.
- Enhanced understanding of the applicability of statistical methods for combining soil data collected with different protocols, to produce harmonised EU statistics and maps.

Scope: The proposed Directive on Soil Monitoring and Resilience (Soil Monitoring Law – SML) aims to put in place a coherent and integrated soil monitoring framework for all soils across the EU. However, currently there are many different methods in the EU to monitor and assess soil health, from sampling to laboratorial procedures, and some Member States have

²⁴⁶ COM/2023/416 final, see [EUR-Lex - 52023PC0416 - EN - EUR-Lex](#)

²⁴⁷ COM/2024/3012, see [Regulation - EU - 2024/3012 - EN - EUR-Lex](#)

long-standing soil monitoring systems and procedures which they prefer to keep for economic reasons and to safeguard long-term datasets.

Validated transfer functions are therefore needed to reliably convert soil measurements to a common reference method and to facilitate a smooth and cost-effective transition to a harmonized soil health assessment across the EU. Some knowledge on transfer functions is already established for certain soil physical and hydraulic properties, but existing knowledge does not cover the entire combination of laboratorial and field methods available across the EU for all the soil descriptors present in the SML proposal.

Proposed activities should:

- Identify and collect the information available in existing samples archives such as LUCAS.
- Develop and test, together with Member State monitoring bodies, transfer functions for all descriptors proposed in the SML proposal (e.g. soil organic carbon, excess nutrient content, soil acidity, pH, P-Olsen, Electrical conductivity, bulk density, etc.) and for the diverse methods used for field sampling collection (including sampling depth) and analysis different than those prescribed in the SML proposal. Identify conversion factors to transform data from one method to another.
- Compare results obtained by different sampling protocols and laboratorial procedures, and link national monitoring systems with LUCAS outputs and the protocols of ISO/CEN and others included in the SML proposal.
- Determine the most reliable statistical methods for combining soil data collected with different sampling protocols and analytical methodologies to produce harmonised and comprehensive statistics and maps.
- Validate transfer functions by sampling a subset of the LUCAS 2022 locations, covering at least 21 MS and 80% of the EU land surface area and analogous to LUCAS in terms of land cover and climate regions. A minimum of 30% of the budget must be allocated for the sampling and analysing of at least 4000 samples.

A strong collaboration is expected with the Joint Research Centre to identify and access existing samples archives and to make sure that relevant data, maps and information can be used and displayed by the EU Soil Observatory. Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the Joint Research Centre's [EU Soil Observatory](#) (EUSO), [SoilWise](#) project. and the JRC Life Cycle Assessment group²⁴⁸.

Concrete efforts should be made to ensure that the data produced in the context of the funded project is FAIR (Findable, Accessible, Interoperable and Re-usable), particularly in the context of real-time data feeds, exploring workflows that can provide “FAIR-by-design” data,

²⁴⁸ See [European Platform on LCA | EPLCA](#)

i.e., data that is FAIR from its generation. Proposals are encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures in the environment, biological & food domains or imaging capacities²⁴⁹.

When dealing with transfer functions, actions should promote the highest standards of transparency and openness, as much as possible going well beyond documentation and extending to aspects such as assumptions, protocols, code and data, that is managed in compliance with the previously mentioned FAIR principles.

Proposals should include dedicated tasks and appropriate resources for coordination measures and joint activities with other relevant EU-funded initiatives, specially under the Mission “A Soil Deal for Europe”, including engagement with the relevant cluster activities. Likewise, projects should build on the results and data collected in previous related EU-funded initiatives, such as [EJP SOIL](#).

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

HORIZON-MISS-2025-05-SOIL-05: EU global footprint on soils

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome: Activities under this topic will help to progress towards the objectives of the Mission ‘A Soil Deal for Europe’, in particular towards its specific objective 7 ‘Reduce the EU global footprint on soils’.

Project results are expected to significantly contribute to all the following outcomes:

- Policy makers and relevant stakeholder have improved access to knowledge and data on the impact of the EU demand for bio-based products (e.g., food, feed, fibre, woods and biomass) on non-EU soils.

²⁴⁹ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>.

- Enhanced recognition and comprehension by businesses, stakeholders and citizens of the impact of EU producers', traders' and consumers' behaviour and decisions on the soil health and related social issues globally.
- Accelerated uptake of integrated innovative and reproducible approaches and management practices to reduce the global impact on soils due to the EU demand for bio-based products.

Scope: The use of bio-based products (e.g. food, feed, fibre, wood and biomass) by businesses and consumers in the EU has an impact on soil health globally. However, this impact has been poorly studied and understood. The European Commission has developed a Life Cycle Assessment (LCA)-based framework to monitor the evolution of the overall environmental footprint of EU production and consumption and to compare it against planetary boundaries, the “[EU Consumption Footprint Platform](#)”. However, this framework does not sufficiently consider the specific impact on soil health and there is a need to enrich the existing indicators in terms of physical, chemical and biological soil properties.

An EU Global Soil Footprint framework would allow measuring the impact that a given activity has on soil health globally, measured in terms of soil degradation. Such a framework should also address the impact of the EU demand for bio-based products on global trade and the links to GDP and the Human Development Index. A crucial step will be to trace back relevant imported products (for final consumption or as inputs to EU production) to the country where they were originally produced. To this end, work can build upon previous work of the JRC on quantifying the [land footprint of EU consumption](#)²⁵⁰. Moreover, there is also a need to investigate further the carbon emissions produced from EU demand (carbon footprint), the impact of EU imports on ecotoxicity and eutrophication (contamination footprint) and soil biodiversity elsewhere, and the environmental impact and social inequalities due to land use change (in particular the effects on deforestation^[OBJ]).

Proposed activities should:

- Develop and test a robust framework or tool (an EU Global Soil Footprint framework) to track, assess and establish a baseline for the global soil footprint of the EU demand for and import of bio-based products (e.g. food, feed, fibre, wood and biomass).
- Explore the positive and negative social, economic and environmental impacts of improved production systems elsewhere, including soil conservation and restoration actions, in their attempt to reduce the EU global footprint on soils.
- Bring forward policy recommendations aiming at minimising the EU's global soil footprint. Identify obstacles and propose incentives for the uptake and scale-up of measures that can help reduce the EU's global footprint.
- Carry out activities for communication and awareness raising on the EU's global soil footprint and for the demonstration and dissemination of measures that can reduce the

²⁵⁰ See <https://data.europa.eu/doi/10.2760/967058>

EU's global soil footprint, in cooperation with international organisations such as UNCCD bodies, FAO or UNEP.

Cooperation with international partners is highly encouraged to engage a global network of experts in life-cycle analysis. In particular, the involvement of Latin American and Caribbean (LAC) partners is encouraged, as this region encompasses more than 50% of the world biodiversity and is an important trading partner for the EU regarding bio-based products. In this sense, activities to be developed should be in line with the roadmap and action plan of the [EU-CELAC Action Plan on Science, Technology and Innovation](#). Involvement of African partners is also encouraged.

When assessing the impact on soils, proposals should take into account the soil health indicators presented in the Mission Soil Implementation Plan and the soil descriptors in the proposed Directive on Soil Monitoring and Resilience.

Proposals should include dedicated tasks and appropriate resources for coordination measures and joint activities with other relevant projects and initiatives funded under the Mission 'A Soil Deal for Europe', including engagement with the relevant cluster activities. Proposals are expected to build on the results of the [SOLO](#) project and its roadmap on knowledge gaps and opportunities²⁵¹. Moreover, proposals should envision to collaborate with international organisations such as [UNEP](#), [UNCCD bodies](#), FAO and FARA²⁵². Finally, proposals should consider synergies with [SCAR-ARCH](#) and Agricultural Research for Development.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the [European Union Soil Observatory](#) (EUSO) and [Life Cycle Assessment group](#) and the [SoilWise](#) project.

HORIZON-MISS-2025-05-SOIL-06: Quantifying the impact of farming practices on soil health in arable lands

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply:

²⁵¹ See [Preliminary assessment of the knowledge gaps to reduce the EU global footprint on soils](#)
²⁵² Forum for Agricultural Research in Africa – <https://faraafrica.org/>

	<p>Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p> <p>The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.</p>
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Expected Outcome: Activities under this topic will help to progress towards the objectives of the Mission '[A Soil Deal for Europe](#)', in particular towards its specific objective 2 “Conserve and increase soil organic matter”, 5 ‘Prevent erosion’, 6 ‘Improve soil structure to enhance habitat quality for soil biota and crops’ and 8 ‘Increase soil literacy in society across Member States’ (see [Mission implementation plan](#)). Activities will also contribute to the implementation of the European Green Deal, in particular nutrient related objectives, the EU Action Plan for the Development of Organic Production, and the environmental objectives of the Common Agricultural Policy.

The successful projects are expected to contribute to all of the following outcomes:

- Land managers, advisors, policymakers, researchers, and citizens have access to up-to-date, consolidated scientific knowledge on the impact of farming practices on soil health - both when applied individually, and critically, when combined as part of a holistic strategy.
- Greater adoption of farming practices by land managers that enhance and restore soil health, supported by robust evidence-based policy measures at both EU and national levels, and aligned with relevant CAP measures.
- Member States' competent authorities recognize specific challenges to improve soil health in their agricultural contexts and obstacles to implementing farming practices, ensuring incentives in their CAP Strategic Plans are aligned accordingly.

Scope: Agricultural land covers nearly half of the EU, with two-thirds dedicated to arable crops. Farming practices, especially in combination, are critical for maintaining soil functions such as structure, nutrient cycling, and water retention — key to food production and ecosystem resilience. There is a need to better understand how different farming practices impact the composition and functions of soil biodiversity, carbon capture and storage, GHG emissions, water infiltration and retention. Additionally, more knowledge is needed to understand how multiple threats and farming practices simultaneously interact and affect soil health (e.g. the interplay between various farming practices and climate change).

The Common Agricultural Policy (CAP) supports sustainable resource management to combat climate change and biodiversity loss²⁵³. In the 2023-2027 period, actions to improve soil health are expected to cover nearly 47%²⁵⁴ of EU's agricultural area, backed by an estimated EUR 50.6 million (measured via [Result Indicator 19](#)²⁵⁵) and around 1,000

²⁵³ See [Sustainable agricultural practices and methods - European Commission](#)

²⁵⁴ COM(2023) 707 final, see [EUR-Lex - 52023DC0707 - EN - EUR-Lex](#)

²⁵⁵ RI.19 - 'UAA under supported commitments favourable to soil management to improve soil quality and biota'

Operational Groups under the [EU CAP Network](#) are expected to address soil. CAP also sets baseline standards conditions ([GAEC](#)) to prevent soil degradation and protect biodiversity and water.

Despite these measures, there is a need to build on existing CAP measures (GAEC, CAP Eco-schemes and AECM²⁵⁶ under Pillar II) for stronger and refined incentives for climate- and environment-friendly approaches, such as organic farming, agroecology, and carbon farming. Crucially, there is still a need for robust scientific evidence on the impact of farming practices—individually and in combination—on soil health at both local and EU scales. Quantitative coefficients capturing these impacts across different pedo-climatic conditions and cropping systems over time remain a key research gap.

Proposed activities should:

- Define and map homogeneous soil-use and pedo-climatic regions in EU arable lands, leveraging existing Earth observation datasets and further develop ([iMAP](#)) coefficients linking farming practices to soil health indicators (aligning with the [Soil Mission Implementation Plan](#) and proposed [Directive on Soil Monitoring and Resilience](#)). Work should focus on soil biodiversity, carbon capture and storage, GHG emissions, and water infiltration/retention, considering both CAP-supported and other farming practices.
- Quantify the impact of farming practices on soil health across major pedo-climatic regions and arable crops in the EU. Establish clear links between farming practices, land use (arable, pasture, etc.) and types of crops for each soil use and pedo-climatic region, considering the defining soil and climate properties. Focus should be on identifying synergies and trade-offs among these practices, supported by refined impact estimates under current and potential adoption scenarios at the EU level. Practices should comply with GAEC standards and their integration with other CAP interventions, such as “Eco-Schemes” or/and “Agri-environment-climate measures” under Pillar II, but not exclusively.
- Develop and expand an inventory of farming practices (e.g., organic fertilisation, no-tillage) that support GAECs and Eco-Schemes for soil health, as outlined in national CAP Strategic Plans. Building on the work of the Joint Research Centre²⁵⁷, the inventory should cover various farming systems and alternative approaches, including organic, agroecological, and regenerative practices.
- Select a set of soil health indicators (SOC, water retention capacity, acidity, conductivity, biodiversity, soil erosion, nutrients, diffuse contamination, etc.) considering the Mission Soil Implementation Plan, the SML and the results produced by the Mission portfolio of projects, to quantify farming practices effects.

²⁵⁶ Agri-environment-climate Measures

²⁵⁷ See [Quantifying the impact of sustainable farming practices on environment and climate - Publications Office of the EU](#)

- Enhance and expand existing online databases and visualisations by integrating data from previous activities (e.g., pedo-climatic regions, arable lands, cropping systems) to improve user accessibility. Streamline and automate updates with new knowledge, focusing on EU primary scientific literature, by leveraging AI to accelerate meta-analysis and drive continuous improvement.
- Develop a dynamic, potentially automatically updated model to compare, analyse and evaluate scenarios assessing the impacts of individual farming practices (e.g., conventional tillage vs. no-tillage, organic amendment vs. mineral fertilisation, etc.) as well as integrated farming strategies (e.g., conservation, organic, agroecology, regenerative).
- Identify and analyse the limitations of map, indicators, model, measurements, and results obtained. Produce a gap analysis to address remaining soil health challenges in Member States, considering what is proposed in national CAP Strategic Plans, and which future R&I could fill.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the [European Union Soil Observatory](#) (EUSO) and [SoilWise](#). Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Reusable).

Proposals are encouraged to leverage, where relevant, the data, expertise and services provided by European research infrastructures²⁵⁸ and results from prior research projects, such as the [EJP Soil](#) data repositories²⁵⁹. The analysis should build on and align with relevant efforts undertaken by the European Evaluation Helpdesk and the JRC within the frame of the iMAP project. Furthermore, proposals should include consultation with national agricultural organisations and private companies to ensure diverse perspectives and expertise are integrated into the analysis.

Proposals should allocate dedicated tasks and adequate resources for coordination and joint activities with other relevant projects and initiatives funded under the Mission ‘A Soil Deal for Europe.’ This includes active engagement with relevant cluster activities, particularly with projects funded under the [Horizon Europe Partnership on Agroecology](#), and collaboration with the JRC to ensure alignment and synergies.

HORIZON-MISS-2025-05-SOIL-07: Improved land suitability for soil health and sustainable biomass production

Call: Supporting the implementation of the Soil Deal for Europe Mission
Specific conditions

²⁵⁸ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>

²⁵⁹ See [Knowledge Sharing Platform](#)

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome: Activities under this topic contribute to the implementation of the Mission ‘A Soil Deal for Europe’ in particular to its specific objective 4 “Reduce soil pollution and enhance restoration” and 7 “Reduce the EU global footprint on soils”, the [EU Bioeconomy Strategy](#) and the Nature Restoration Law.

Project results are expected to contribute to all of the following expected outcomes:

- Improved soil health, land suitability choice and optimised sustainable production of biomass (both quantity and quality) across different types of land (including agricultural lands, forest and -for paludiculture or nature restoration purposes only- also peatlands and marginal lands²⁶⁰).
- Improved knowledge on the relationships between biomass production, soil biodiversity and ecosystem health, and soil-water interactions (water-holding capacity, drainage patterns, and irrigation requirements).
- Better understanding and assessments of land suitability and land management practices that contribute to soil restoration and sustainable biomass production for food and non-food uses across Europe.
- Increased deployment of sustainable biomass production systems that improve soil health while valorising production systems’ contribution to nature restoration, climate mitigation and climate resilience adaption strategies.

Scope: Soil, as a fundamental component of terrestrial ecosystems, is crucial for biomass²⁶¹ production and its capabilities and limitations. Hence, effective land use planning must consider the requirements and constraints associated with different soil properties. For instance, excessive nutrient export due to biomass removal can negatively impact soil health and the overall ecosystem functioning. Consequently, prioritizing land suitability, alongside other key biophysical aspects such as climate, is essential for maintaining soil health while ensuring sustainable biomass production.

When stakeholders and land managers take land suitability and soil properties into account, they can make more informed decisions about e.g., land use, land management practices, and

²⁶⁰ See [Marginal land | Knowledge for policy](#)

²⁶¹ In this call, biomass refers to organic, non-fossil material of plant biological origin. The biomass in the scope of this call includes biomass of plants used for food, feed, ecosystem restoration and bio-based materials.

environmental protection. This approach ultimately promotes sustainable and efficient land management strategies for biomass production.

Proposed activities should:

- Develop process-based models using various data sources including the EUSO data repository, the European Joint Programme on Agricultural Soil Management (EJP SOIL) Long Term Field Experiment²⁶² and other EJP SOIL data repositories and literature review field results from ongoing EU Mission Soil projects, including the Mission Soil living labs, and other relevant Earth observations datasets. The models should simulate soil properties, land suitability, and their impact on soil health and biomass production for both food and non-food uses.
- Engage with land managers to understand their needs and challenges and develop decision tools to aid them in enhancing biomass production while maintaining soil health.
- Conduct a comprehensive literature review focusing on data to assess the conditions for optimal land suitability that contributes to improving soil health while producing sustainable biomass – considering the dynamics of soil water interactions (water-holding capacity, drainage patterns, and irrigation requirements). The analysis should include social, economic, and environmental aspects of biomass production and use.
- Broaden the scope of the findings by upscaling experimental results and models to larger scales (regional, national, European) and integrate them with social-economic data (e.g. cost, effect on local economies, job creation, social implications).

Proposals should focus the proposed activities in selecting the ten most important annual and perennial agricultural and forest crops and paludicultural plants in Europe, including peatland and marginal land biomass. Multifunctional cropping systems should be considered together with the corresponding value creation and process chains that improve the nexus of soil, water, biodiversity, climate adaption, climate protection, and overall resilience. In the specific case of peatlands, biomass should be adapted to the typical peatland vegetation for each pedoclimatic region, taking into account current and potential future rewetting actions, and never including afforestation, as rewetting is the only long-term alternative for sustainable use and restoration of drained peatlands (for both carbon sequestration and biodiversity objectives).

Proposals should outline a clear pathway towards open access, longevity, sustainability and interoperability of knowledge and outputs – including adoption of standard-based ontologies/vocabularies and data harmonization mechanisms – through close collaboration with the [European Union Soil Observatory](#) (EUSO) and the [SoilWise](#) project. Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR (Findable, Accessible, Interoperable and Reusable).

²⁶²

See [Partner countries with LTEs](#)

Proposals are encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures²⁶³. Proposals should include dedicated tasks and allocate appropriate resources for coordination measures and joint activities with other relevant projects and initiatives funded under the Mission ‘A Soil Deal for Europe’, including engagement with the relevant cluster activities.

HORIZON-MISS-2025-05-SOIL-08: Support to the operation and further development of soil-health science-policy interfaces and national soil-health hubs

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁶⁴ .

Expected Outcome: Activities under this topic contribute to strengthening science-based policies for soil health across different levels of governance, in particular the implementation of the proposed EU Directive on Soil Monitoring and Resilience (Soil Monitoring Law), and to improved anchoring of R&I activities of the EU Mission “A Soil Deal for Europe” (Mission Soil) at national and regional level.

Project results are expected to contribute to all of the following expected outcomes:

- EU and (sub-)national decision-makers across different sectors have easy and timely access to, and make increasing use of, up-to-date policy-relevant scientific knowledge –

²⁶³ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>.

²⁶⁴ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

presented in a way that suits their purposes – on drivers of soil degradation, the state of soil health, and sustainable soil management practices.

- Across all EU Member States and interested Horizon Europe Associated Countries, national- and regional-level structures for coordinating soil-health research and policy in the context of Mission Soil are strengthened or, where relevant, newly established, and the commitment from national authorities is strengthened. In addition, exchanges with similar structures established to support other EU Missions are facilitated at national and international level.

Scope: A range of programmes, projects and initiatives have been working at international, EU, and national level to increase and systematise available scientific knowledge on soil health and drivers of soil degradation, and to facilitate the uptake of this knowledge in policies for more sustainable soil management practices. This includes efforts, including under the Mission Soil, to create dedicated structures at national level to facilitate the sharing and transfer of knowledge between science on the one hand, and the designing and implementation of policies on the other. However, linkages between different science-policy interfaces in the European and international landscape remain relatively weak, and their effectiveness is subject to debate, while some do not appear to be fully operational.

There is now a need to systematically take stock and assess the strengths and weaknesses of existing science-policy interfaces in a comparative perspective and, where relevant, to improve their results, outcomes and impacts. Their effectiveness should be evaluated across different contexts, and coordinated action should be taken to make them fully operational, ensure coverage of a broader range of land uses, and address all relevant levels of governance. This should serve also the transposition and implementation of the forthcoming Soil Monitoring Law, for which national authorities and soil stakeholders need to consider the latest scientific and policy developments and have opportunities to exchange with each other and with the scientific community.

Proposed activities should:

- Take stock of past, present and planned soil-health related science-policy mechanisms and activities across different policy areas (covering at least agriculture and forestry, environment including biodiversity, climate, and spatial planning) and governance levels, analyse their purposes and the tools employed, and assess performance (at least in terms of effectiveness, efficiency and long-term sustainability). This should include case studies of real-life science-policy interactions around specific challenges of monitoring and improving soil health, and identification of criteria for – and likely conditions of – success or failure of such interactions.
- Facilitate better connections among existing mechanisms and structures for science-policy dialogue on soil health across sectors and governance levels, so that overlaps and gaps in substantive and territorial coverage are reduced, and overall effectiveness is increased.

- Identify and evaluate options for setting up and operating a functioning science-policy interface for soil health across the EU and its Member States and interested Horizon Europe Associated Countries. Options should include the medium-term establishment of a dedicated science service as a central entry point for support requests from EU and national administrations.
- Develop one or more tools for managing (collecting, organising, synthesising and presenting) existing and emerging soil-health knowledge, in particular (but not exclusively) from EU-funded R&I projects, with a view to integrating the tool(s) into a future EU-wide science-policy interface.
- Taking into account different biogeographic, administrative and cultural contexts and building on relevant existing structures, support the creation or further development and improved operation of national soil-health hubs in all Member States and interested Associated Countries, and coordinate the creation of a functioning Europe-wide network. The hubs should involve all relevant parts of public administrations as well as other stakeholders also from outside the R&I sector (including private sector and philanthropy). They should liaise with relevant national, regional and EU authorities, including National Contact Points for Horizon Europe, and address the full range of land uses impacting on soil health. Among other functions, the hubs and their network should be able to function as, or in close cooperation with, science-policy interfaces and provide regular opportunities for the further development of research agendas in line with evolving policy needs at national and EU level.

Proposals should build on the work of previous and ongoing projects and initiatives addressing horizontal aspects of science-policy interaction and knowledge management in the Mission Soil and other parts of Horizon Europe and other EU-funded programmes.²⁶⁵ They should include a dedicated task and allocate resources for close coordination with other Horizon Europe projects addressing (sub-)national involvement in different missions horizontally, as well as contribute to relevant cluster activities in the context of the Mission Soil Platform. Proposals should also include a task and resources to facilitate regular exchanges with hubs or similar structures set up by other EU Missions, in order to identify and share best practices on science-policy interaction, stakeholder and citizen engagement, the long-term sustainability of the hubs, or collaborations and synergies between them at the national and subnational levels. Additionally, proposals should support and collaborate closely with Soil Mission Board members to engage new stakeholders, mobilise and align additional funding, and promote and support the development of hubs.

Proposals should work closely with the European Commission's Joint Research Centre (JRC) to contribute to the JRC's efforts on soil monitoring and the development of the [European Union Soil Observatory](#) (EUSO), and with international institutions and initiatives addressing

²⁶⁵ Including the project [SoilWise](#); also relevant is the [Mission Soil Platform](#).

science-policy interaction for soil health.²⁶⁶ In particular, proposals should actively engage the national soil-health hubs in relevant OECD initiatives aiming at strengthening evidence-informed policy-making for mission-oriented innovation (e.g. contributing to the community of practice through mutual learning, workshops and networking initiatives).

This action supports the follow-up to the July 2023 [Communication on EU Missions assessment](#).

HORIZON-MISS-2025-05-SOIL-09: Citizen engagement for sustainable land management through local and regional authorities

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: Activities under this topic contribute to the implementation of the Mission ‘A Soil Deal for Europe’, in particular to its specific objective 8 “improve soil literacy in society”, and to strengthening the capacities of local and regional authorities in line with the proposal for a Directive on Soil Monitoring and Resilience.

Activities should also contribute to meeting the Sustainable Development Goal (SDG) 15 on Life on land and SDG 11 on Sustainable Cities and Communities.

Project results are expected to contribute to all of the following expected outcomes:

- Substantially increased awareness and understanding among citizens and local and regional policy makers of the value of soils, soil health challenges and drivers (both bio-physical and socio-economic dimensions) across Europe.

²⁶⁶ International institutions whose relevance should be explored include the Global Soil Partnership’s Intergovernmental Technical Panel on Soils and the Science-Policy Interface of the UN Convention to Combat Desertification (UNCCD).

- An increased number of regions and municipalities across Europe have adopted Territorial Management Agreements²⁶⁷ co-designed with citizens and stakeholders to foster sustainable land management practices.
- Local and regional authorities²⁶⁸ have improved access to capacity building activities on how to implement solutions for the protection and restoration of soil health and enhance citizen engagement in sustainable land management.

Scope: Citizen engagement is one of the building blocks of the Mission Soil but despite the advances in recognising the importance of soil health and the momentum for soil in the political agenda, active participation in soil protection and restoration and understanding of soil health importance often remain limited among non-experts. Activities under this topic should involve local and regional authorities in the protection and restoration of soil health and establish participatory processes that take into account citizens' priorities. Local and regional participatory processes should result in Territorial Management Agreements²⁶⁹ aimed at the protection and restoration of soil health for the provision of ecosystem services, including biodiversity, and climate change mitigation and adaptation.

Proposed activities should:

- Provide training and technical support to public authorities to design and run inclusive and effective participatory processes at local and regional level that lead to the adoption of Territorial Management Agreements to foster sustainable land management and contribute to climate change adaptation and mitigation.
- Launch the implementation of at least 40 Territorial Management Agreements, one per local or regional authority involved, and provide guidelines and resources to sustain and monitor their implementation in the long term.
- Organise capacity-building activities for representatives of local and regional authorities including training, peer-to-peer learning and knowledge-sharing activities to promote the adoption of solutions for the restoration of soil health at their level of governance.

Proposals should actively involve local and regional authorities as beneficiaries or through the use of financial support to third parties. If making use of financial support to third parties, the support should be provided in the form of grants following an open call of European dimension for local or regional authorities to run participatory processes to co-design with

²⁶⁷ Territorial Management Agreements is the terminology used by the Horizon Europe project Healthy Municipal Soils (HuMuS). For consistency, proposals should use the same terminology.

²⁶⁸ In the context of this topic, regional authorities refer to legal entities responsible for managing regions, geographical areas at sub-national level, defined as NUTS 2 and 3, corresponding to actual administrative units with their own representation/government. For more information about NUTS (Nomenclature of territorial units for statistics), see <https://ec.europa.eu/eurostat/web/nuts>

²⁶⁹ Territorial Management Agreements are co-designed pacts between a public authority, relevant stakeholders and citizens aimed at the protection and restoration of soil health. The Agreement should define roles, responsibilities and actions of the parties involved, as well as monitoring and evaluation mechanisms to keep track of the progress made towards the desired results.

citizens Territorial Management Agreements and launch their implementation. The maximum amount to be granted to each third party is EUR 60 000.

The local and regional authorities involved in the project are expected to engage citizens and stakeholders at the local and regional level for the protection and restoration of soil health.

Proposals should bring together expertise on environmental and soil sciences, as well as transdisciplinary expertise on spatial planning and social sciences and humanities (SSH), including gender studies, to design and organise training and successful capacity building activities for local and regional authorities and support them in the implementation of effective participatory processes. The engagement of citizen and stakeholders in the design of Territorial Management Agreements should be representative of the local community and stakeholders and be inclusive. Thus, proposals must incorporate gender perspectives and give attention to the inclusion of people in vulnerable situations.

Proposals should include dedicated tasks and appropriate resources for coordination measures and joint activities with other relevant projects and initiatives funded under the Mission “A Soil Deal for Europe”, including engagement with the relevant cluster activities.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the [European Union Soil Observatory](#) (EUSO) and [SoilWise](#).

HORIZON-MISS-2025-05-SOIL-10: Network on carbon farming and emissions reductions for agricultural and forest lands

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the</p>

	Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁷⁰ .
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Expected Outcome: Activities under this topic contribute to the implementation of the Mission ‘A Soil Deal for Europe’, in particular specific objective 2 “conserve soil organic carbon stocks”. Activities further support the design and implementation of soil health-improving innovative carbon farming practices in Europe, as intended by the implementation of the EU [Carbon Removal and Carbon Farming](#) (CRCF) Regulation²⁷¹ and the European Commission [Communication “A Vision for Agriculture and Food”](#). Activities should also contribute to meeting the Sustainable Development Goal (SDG) 13 on Combating climate change and SDG 15 on Life on land. Carbon farming activities should at least generate co-benefits for the objective of protection and restoration of biodiversity and eco-systems, including soil health as well as avoidance of land degradation, thereby contributing to achieving the nature restoration targets set out in Union law.

Project results should contribute to all of the following expected outcomes:

- Consolidated knowledge and descriptions of the state-of-the-art on practices for carbon farming and for the reduction of emissions from agriculture, forestry and livestock, in support of, but not limited to, the implementation of the CRCF, are available for land managers, farmers and forest owners and the Commission’s [Expert Group on carbon removals](#).
- Enhanced uptake by land managers of carbon farming and practices for the reduction of emissions (mentioned in the previous bullet) in Europe, and development of standards to support these practices.
- Increased capacities of land managers for measuring, monitoring and standardising carbon fluxes, in particular at landscape level, through a robust network for data collection and facilitated improvement of (new) data collection.

Scope: The success of carbon farming in Europe will be judged on the quantity and quality of the sequestration of carbon in plants and soils and the reduction of greenhouse gas (GHG) emissions from agricultural soils, as well as on the benefits for sustainability objectives (notably biodiversity) of the activities leading to such carbon sequestration or emission reductions, in a context of increasing impacts from climate change. To upscale carbon farming successfully and to establish long-term business perspectives, it is essential to standardise the methodologies and rules for monitoring, reporting and verifying (MRV) the gains or losses in carbon sequestered. Currently, private schemes apply very different benchmarks and rules to the carbon credits placed on the voluntary markets. With a high degree of transparency, environmental integrity, and methodology standardisation, buyers

²⁷⁰ This [decision](#) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁷¹ [Regulation - EU - 2024/3012 - EN - EUR-Lex](#)

should have more trust in the quality of the offered carbon farming credits, land managers should also be able to more easily estimate their potential revenues, and policy makers should be keener to allow the use of such credits to warrant compliance with the EU climate regulatory framework, including currently existing 2030 targets (Effort-Sharing Regulation, Regulation on land use, land use change and forestry - LULUCF) and the 2050 climate neutrality goal. Therefore, such a regulated framework should contribute to develop a successful market for carbon farming.

The CRCF was adopted by the EU co-legislators in December 2024. Following the legislative process, the scope of carbon farming was extended to cover the certification of emission reductions from the improved use of fertilisers, in addition to carbon removals and the reduction of carbon release. With the CRCF adopted, it is now a priority for the Commission to advance work on preparing (and also updating in the future) the specific high-quality carbon farming certification methodologies, such as from rewetting of drained peatlands or agroforestry, with the continued assistance of the Commission's Expert Group on carbon removals. As part of the legislative review of the CRCF in 2026, the Commission will also prepare a pilot methodology for the certification of practices that reduce emissions from livestock management.

The Expert Group is assisting the Commission in the preparation of policy initiatives and non-legislative proposals and covers all carbon removal topics (permanent storage, carbon farming and storage in products). To develop its work, the Expert Group needs the continuous support of a network of key stakeholders to collect and aggregate views on best practice for standards for carbon farming and emissions reductions and to synthesise the state-of-the-art on existing related certification methodologies. Currently, [the CREDIBLE project](#) (foreseen to end in June 2026) is building and coordinating this network, developing a platform for knowledge sharing, and establishing data collection networks. The network should remain in a key position to provide input for the discussions as well as to contribute to increased capacities for measuring, monitoring and standardising carbon fluxes, in particular at landscape level, through a robust network for data collection. There is also a need to accompany the implementation of the CRCF by enhancing the uptake of its methodologies and by getting feedback from the actors applying them on how to update these methodologies.

Proposed activities should:

- Coordinate the continuation and expansion of the existing network of key stakeholders drawn from European research facilities, systems developers, solution providers, administrations, farm advisors and managers and others, involved in soils programmes linked to carbon sequestration and emission reductions, in particular at the landscape scale.
- Support the work of the Expert Group on carbon removals by providing concrete, operational and solution-oriented recommendations, based on best practice and identifying the actors (European/national/regional authorities, certification bodies, land managers, etc.) which should implement each specific recommendation.

- Continue developing a platform for networking, knowledge sharing, exchange of experiences, mutual learning, best practices and support to facilitate the development (design, implementation and evaluation) of result-based schemes for carbon farming and the reduction of emissions from agricultural soils and livestock.
- Underpin the expansion of data collection networks (such as carbon flux measurements stations, ground sampling campaigns, etc.), continuing to promote the practice of data sharing and standardisation, retrieval and aggregation of information.
- Identify gaps and opportunities at the landscape level in ecosystem monitoring and soil carbon flux mitigation practices, leveraging EU level geographically-explicit monitoring systems and solutions.
- Support and establish pathways to improve national GHG inventories with the data received from projects (e.g. carbon farming).
- Propose and adopt strategies to ensure that the above-mentioned activities are self-sustainable at the end of the project.

Proposals should cover **carbon removals and GHG emission reductions** (e.g. due to fertilisers) **in all relevant LULUCF categories**²⁷², including at least croplands and grasslands under various farming systems management / approaches (e.g. agroforestry, agroecology, organic farming), and forest land categories, regardless of their accountability in either the Agriculture or LULUCF sectors of the GHG inventories. Activities must contribute to supporting the knowledge base for addressing emissions from livestock through inter alia improved farm management and stocking densities. A systemic approach considering both removals and emission reductions by implementing whole-farm management approaches, including livestock, would be desirable. Proposals should aim to cover emissions reductions in the different nutrient and mass-flow chains (e.g. crop, feed, stable, biogas plant, fertilisers, root and crop residues, biogas, root uptake of nutrients, humus reproduction, etc.) as well as value creation chains (including processes, business options, carbon storage and multifunctional ecologic aspects).

A substantial part of the budget should be dedicated to co-creating with stakeholders the project's tools and services, enhancing communication, raising awareness and engaging with stakeholders, thereby ensuring co-ownership of the project's results and outputs and supporting the interest in, knowledge about and uptake of carbon farming.

Special attention should be given to the promotion and integration of existing databases and datasets, the application of digital technologies, and the combination of Earth observation techniques (drones, airborne, satellite based) with in-situ monitoring for (enhancing) the provision of robust, timely and accurate GHG removals/emissions' estimates.

²⁷² Article 2 of 2023 revision of EU Regulation (EU) 2018/841 of the European Parliament and of the Council on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry (LULUCF) in the 2030 climate and energy framework, see <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02018R0841-20230511>.

Proposals must include dedicated tasks and appropriate resources for:

- Building on other relevant EU programmes, projects and initiatives (which will have finished at the start of the project) on carbon farming and soil carbon monitoring: e.g. [CREDIBLE](#); [MRV4SOC](#); [EJP Soil](#)- including the project [Road4Schemes](#)-; [ClieNFarms](#); [HOLISOILS](#); [ORCASA](#); [SEPLA](#) and the work of the JRC within the Administrative Arrangement “Carbon Removal on Land”; relevant [LIFE](#) projects; relevant data from [the Farm Sustainability Data Network \(FSDN\) initiative](#) as well as from [countries GHG inventories](#).
- Collaborating on measures and joint activities with other relevant projects and initiatives (or build on them, if they have finished by the start of the project): e.g. [MARVIC](#); [ESA World Soils](#); [LILAS4SOILS](#); [HORIZON-MISS-2024-SOIL-01-07: Development of high spatial-resolution monitoring approaches and geographically-explicit registry for carbon farming](#); [HORIZON-CL6-2024-CLIMATE-02-1: New knowledge and innovations for climate-smart farming - connecting research stations](#); [HORIZON-CL6-2025-02-CLIMATE-04: Monitoring, reporting, verification and mitigation of non-CO2 greenhouse gas emissions and related air pollutants from agriculture](#); [Climate Farm Demo](#); [OrganicClimateNET](#); [the Horizon Europe Partnership on Agroecology](#); relevant [LIFE](#) projects.
- Engaging with the relevant Mission Soil cluster activities and ultimately feeding into the Expert Group.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the [European Union Soil Observatory](#) (EUSO) and [SoilWise](#).

HORIZON-MISS-2025-05-SOIL-11: Soil Salinity in Europe: Drivers, indicators, current levels and temporal changes

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 6.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the

	Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). ²⁷³ .
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Expected Outcome: Activities under this topic will help progress towards the objectives and targets of the Mission ‘A Soil Deal for Europe’, in particular towards its target 4.6 ‘Halt and reduce secondary salinization’. Activities will also contribute to the Sustainable Development Goal (SDG) 13 on climate action and SDG 15 on Life on Land.

The successful projects are expected to contribute to all of the following outcomes:

- Policy makers and relevant stakeholders have access to improved indicators and to knowledge and quantitative data on the current levels of soil salinity in Europe and its impact on ecosystem services provided by soils (such as providing food, clean water and a habitat for biodiversity).
- Policy makers and relevant stakeholder have an enhanced understanding of the primary drivers and mechanisms of soil salinization across different pedo-climatic regions in Europe.
- Policy makers and relevant stakeholder have improved access to knowledge and quantitative data on temporal shifts in soil salinity levels over the past decades and to projections for future trends across Europe under varying scenarios.
- Accelerated uptake in land use planning practices of innovative and reproducible sustainable land management strategies to prevent, minimise and remediate soil salinization in Europe.

Scope: Excessive soil salinity is a significant environmental issue in Europe, negatively impacting soil fertility, plant growth, soil biodiversity, the soil microbiome, and overall ecosystem functioning. Climate change, coupled with increased evaporation and irrigation, is likely to exacerbate salinization, potentially leading to uncertain consequences for carbon storage and water cycling because of soil degradation induced by salinity. Salinity is one of the descriptors in the proposal for a Directive on Soil Monitoring and Resilience and is recognized as one of the major drivers of soil degradation. The extent of soil salinization in Europe remains uncertain. Currently, there is no quantitative model capable of predicting future soil salinization in Europe under changing climate conditions at the resolution necessary for local management action and policy development.

Proposed activities should:

²⁷³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Investigate the relationship between soil salinity, vegetation, soil biodiversity and drought (climate conditions) across all relevant land use types, and in the specific case of agricultural lands also including the relationship between crop production, plant adaptation mechanisms and crop resilience.
- Develop a harmonised assessment of soil salinity in Europe. This should include integration of high-resolution remote sensing data (earth observation techniques) with quantification techniques to enhance spatial resolution and accuracy in soil salinity monitoring, harmonisation of laboratorial procedures and monitoring systems, and testing the feasibility of statistical methods to combine soil salinity data collected by different protocols.
- Develop a quantitative model to predict future soil salinization in Europe under changing climate conditions.
- Assess the impact of saltwater intrusion on soil salinity and soil health in coastal regions to gauge vulnerability within climate change and rising sea levels.
- Identify hotspots of soil salinization and areas at risk across Europe to inform policy formulation, action planning, and sustainable land management strategies.
- Formulate innovative land management strategies that address both mitigation and adaptation to soil salinization, in co-creation with relevant stakeholders.

Proposals should include dedicated tasks and appropriate resources for coordination measures and joint activities with other relevant projects and initiatives funded under the Mission ‘A Soil Deal for Europe’, including engagement with the relevant cluster activities.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the [European Union Soil Observatory](#) (EUSO) and [SoilWise](#). Particular efforts should be made to ensure that the data produced in the context of this topic is FAIR²⁷⁴. Proposals are encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures²⁷⁵.

HORIZON-MISS-2025-05-SOIL-01-two-stage: Living labs to enhance soil health in Continental, Boreal and Alpine biogeographical regions

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
<i>Expected EU contribution per</i>	The Commission estimates that an EU contribution of around EUR 12.00 million would allow these outcomes to be addressed

²⁷⁴ Findable, Accessible, Interoperable and Reusable

²⁷⁵ The catalogue of European Strategy Forum on Research Infrastructures (ESFRI) research infrastructures portfolio can be browsed from ESFRI website <https://ri-portfolio.esfri.eu/>.

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<i>project</i>	appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 36.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The overall threshold for the second stage evaluation will be 12, with a minimum threshold of 4 for the ‘Excellence’ criterion’.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>Proposals must focus on one of three biogeographical regions: Continental, Boreal or Alpine, i.e., the majority of the living labs of each proposal must be located in one of these three biogeographical regions. Proposals must clearly indicate which biogeographical region they focus on. To ensure that all three biogeographical regions are covered, grants will be awarded to applications not only in order of ranking but also to at least one project focusing on each of the mentioned biogeographical regions, provided that proposals attain all thresholds.</p> <p>* Biogeographical regions in Europe according to the European Environmental Agency.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties to facilitate active involvement of smaller actors (e.g. land managers and owners such as farmers, SMEs or civil society) in one or more of the living labs of the project. The support to third parties can only be provided in the form of grants (further to calls or, if duly justified, without a call for proposals). The maximum amount to be granted to each third party is EUR 60 000.</p>

Expected Outcome: Activities under this topic respond directly to the goal of the Mission ‘[A Soil Deal for Europe](#)’ (Mission Soil) to set up 100 living labs and lighthouses to lead the

transition to healthy soils by 2030. They support the specific objectives 1 to 8 of the Mission Soil (see the [Mission implementation plan](#)).

Activities should also contribute to meeting the European Green Deal ambitions and targets and more specifically those of the [EU Biodiversity Strategy for 2030](#), the [EU soil strategy for 2030](#) and the [proposal for a Soil Monitoring and Resilience Directive](#), the [Zero Pollution Action Plan](#), the [Communication on Boosting Biotechnology and Biomanufacturing in the EU](#), as well as to Sustainable Development Goals 15 on Life on land and 3 on Good health and well-being.

Project results are expected to contribute to all of the following outcomes:

- Increased capacities for participatory, interdisciplinary and transdisciplinary R&I to co-create, and co-implement economically viable soil health solutions.
- Improved soil health monitoring and increased availability of high-quality, standardized soil data at both local and regional levels.
- Practice-oriented knowledge and tools are more easily available to land managers and land users resulting in an enhanced consideration and uptake of effective soil health solutions.
- Policy makers are more aware of local needs regarding soil health including the economic sustainability of solutions, and use this knowledge to design and implement more effective policies to enhance soil health.

Scope: The Mission Soil proposes the deployment of living labs as a novel approach to research and innovation in soil health²⁷⁶. Living labs have the potential to facilitate a green transition by involving multiple actors in real-life sites within a local/regional setting to co-create soil health solutions and achieve large-scale impacts on soil health and soil governance. Projects funded under this topic should deploy a number of living labs to expand and complement the network of soil health living labs initiated in previous Mission Soil topics to gradually establish 100 living labs and lighthouses to lead the transition towards healthy soils by 2030²⁷⁷.

Soil health living labs are long-term collaborations between multiple actors to address common soil health challenges in real-life sites at local or regional level²⁷⁸ (10 to 20 sites in each living lab). Depending on the level at which each living lab operates and the specific context (e.g. land use covered or soil health challenge addressed), applicants can exceptionally propose living labs with fewer sites. Living labs can address soil health challenges in or across different land uses (agricultural, (peri-)urban, (post-)industrial, forest

²⁷⁶ [Implementation Plans for the EU Missions - European Commission](#)

²⁷⁷ [Catalogue 2024 - Mission Soil Living Labs and Lighthouses](#) | [Mission Soil Platform](#)

²⁷⁸ In this topic, it is recommended to define the living labs location using the NUTS2 division ([Eurostat Statistical Atlas](#)).

and (semi-)natural). Individual sites can be farms, forest holdings, urban green²⁷⁹ areas, industrial areas, etc., where work is carried-out and monitored under real-life conditions. Sites that are exemplary in their performance in terms of soil health improvement and serve as places for demonstration of solutions, training and communication are lighthouses. Lighthouse sites can be part of a living lab or be situated outside a living lab. Projects funded under this topic are expected to kick-start participatory process or build on existing ones. While normally projects run for four years, the duration of the projects should accommodate longer timescales required to establish participatory processes and/or for soils processes to take place.

Actors working on common shared soil health challenge(s) within and across the living labs of the same project, will be able to compare results, exchange good practices, validate methodologies, replicate actions and solutions and benefit from cross-fertilisation, thereby accelerating the transition towards the shared objective of improving soil health.

More specifically, each of the proposals should:

- Support the setup of four to five living labs at regional or local level in the Continental, Boreal or Alpine biogeographical region²⁸⁰, to work together on common shared soil health challenge(s). Proposals should clearly indicate which of one of these three biogeographical regions they focus on, and should establish the majority of the living labs within the chosen biogeographical region. However, the remaining living labs can be still located in other biogeographical regions outside of the one selected. The living labs should work on relevant soil health challenges in the selected biogeographical region. The living labs should be located in at least three different Member States and/or Associated Countries. Proposals should explain the rationale and mechanism for cooperation within and across the living labs and explain how the work undertaken will contribute to one or more of the Mission's specific objectives²⁸¹. Proposals with all living labs located in brownfield areas²⁸² are excluded from this topic as a dedicated topic is opened in this work programme (HORIZON-MISS-2025-SOIL-01-02: Living Labs for soil remediation and green redevelopment of brownfields).
- Establish an interdisciplinary, participatory and multi-actor approach in the living labs to co-design, co-develop, and co-implement locally adapted solutions for the common shared soil health challenge(s) taking into account relevant soil health drivers and

²⁷⁹ By urban green areas, we refer to green spaces in cities such as parks, gardens, green roofs or walls, green corridors, squares, recreational areas, etc.

²⁸⁰ [Biogeographical regions in Europe](#) according to the European Environmental Agency.

²⁸¹ Mission Soil specific objectives: reduce land degradation relating to desertification; conserve and increase soil organic carbon stocks, no net soil sealing and increase the reuse of urban soils; reduce soil pollution and enhance restoration; prevent erosion; improve soil structure to enhance habitat quality for soil biota and crops; reduce the EU global footprint on soils; increase soil literacy in society.

²⁸² See definition of brownfield areas under topic HORIZON-MISS-2025-SOIL-01-02

pressures²⁸³. Proposed solutions should be adapted to the different environmental, socio-economic and cultural contexts in which the living labs are operating.

- Establish for each living lab a baseline of the soil conditions to allow for an accurate co-assessment of the changes in the different sites over time, and to monitor soil health improvements. The set of soil health indicators/descriptors presented in the proposal for a [Directive on Soil Monitoring and Resilience](#) should be used, as a basis; proposals may complement with additional indicators depending on the soil health challenge(s) addressed, pedoclimatic conditions, land use, etc.”
- Monitor and evaluate the effects of the proposed solutions on soil health and associated ecosystem services, demonstrating their viability - technical, social, economic, cultural and environmental - scalability and transferability to diverse contexts.
- Identify sites that demonstrate high performance and that may be converted into lighthouses. This can be performed both at proposal stage or later on, during the living lab operation.
- Propose strategies (e.g., financial, organisational) to ensure the long-term sustainability of the established living labs beyond the Horizon Europe funding. Strategies should include the identification of possible business models and actions involving a mix of public or private funding schemes, financial instruments, cooperation with local authorities, engagement of social economy entities, social enterprises, business communities, SMEs, as well as attracting investors and entrepreneurs.

In line with the nature of living labs, projects must adopt the multi-actor approach. The actors involved in each living lab may vary, based on its unique characteristics and may include, among others, researchers, landowners or land managers, industry representatives (e.g., SMEs), public administrators and civil society representatives (e.g., consumers, local residents, environmental NGOs, youth organisations). Care should be taken to describe the capabilities, roles and resources of the different actors involved in the living labs. An effective contribution of social sciences and humanities and the arts (SSHA) is expected to foster social innovation, knowledge transfer and socio-cultural and behavioural change.

To encourage and facilitate the involvement of different types of actors in the living labs, applicants are reminded of the different types of participation possible under Horizon Europe. This includes not only beneficiaries (or their affiliated entities) but also associated partners, third parties giving in-kind contributions, subcontractors, and recipients of financial support to third parties. Financial support to third parties (FSTP) to facilitate active involvement of small actors (e.g. land managers and landowners such as farmers, SMEs or civil society) in one or more of the living labs of a project, can be provided through calls or, if duly justified, without a call for proposals. Applicants are advised to consult the standard conditions set out in Annex B of the General Annexes including those that apply to FSTP.

²⁸³ See [Soil Needs and Drivers of Change Across Europe and Land Use Types - Booklet](#) from PREPSOIL project

Dedicated tasks and appropriate resources should be envisaged to collaborate with [SOILL](#), the structure created to support soil health living labs and lighthouses which offers significant capacity building opportunities for the living labs actors. Applicants can benefit from the services of [SOILL](#) already during the proposal preparation stage. During implementation, collaboration will include, among others regular reporting on living labs performance. The details of the collaboration will be further defined during the grant agreement preparation phase.

Proposals are expected to build on existing knowledge (e.g. data from national soil health monitoring, LUCAS) and solutions developed and tested at national scale or in the frame of other Horizon projects including those funded under the Mission ‘A Soil Deal for Europe’. Proposals should therefore include dedicated tasks and appropriate resources for collaboration with relevant projects and initiatives and engage in relevant Mission Soil clustering activities. Proposals are also encouraged to consider, where relevant, the data, expertise and services offered by European research infrastructures ([ESFRI](#)) and if relevant to cooperate with the Horizon Europe Partnerships on [Agroecology](#) and on [Sustainable Food Systems](#) and/or relevant networks active at local level, such as the EIP-AGRI operational groups to promote the involvement of key local stakeholders.

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the European Union Soil Observatory (EUSO) and the project [SoilWise](#). In particular, proposals should ensure that relevant data, maps and information can potentially be available publicly through the EUSO. Concrete efforts should be made to ensure that the data produced in the context of the funded project is FAIR (Findable, Accessible, Interoperable and Re-usable).

To ensure that all three biogeographical regions are covered (Continental, Boreal and Alpine), grants will be awarded to applications not only in order of ranking but also to at least one project focusing on each of the above mentioned biogeographical region, provided that proposals attain all thresholds.

HORIZON-MISS-2025-05-SOIL-02-two-stage: Broadening the living labs approach for soil health in Africa and Latin America and the Caribbean (LAC)

Call: Supporting the implementation of the Soil Deal for Europe Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions

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<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>Due to the scope of this topic, all legal entities established in: (i) all African Union member states*; or (ii) in all member states of the Community of Latin American and Caribbean States (CELAC)** are exceptionally eligible for Union funding (i.e., even if they are not established in a low-middle income country, following the ‘List of Participating Countries in Horizon Europe’, which are directly eligible for funding).</p> <p>In addition, international organisations with headquarters in an EU Member State, an Associated Country, an African Union member state* or a CELAC member state** are exceptionally eligible for funding.</p> <p>* "African Union member states" includes countries whose membership has been temporarily suspended.</p> <p>** The member countries of CELAC.</p> <p>Proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.</p>
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The overall threshold for the second stage evaluation will be 12, with a minimum threshold of 4 for the ‘Excellence’ criterion’.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure that both regions (Africa and LAC) are covered, grants will be awarded to applications not only in order of ranking but at least also to one project focusing on Africa that is the highest ranked, and one project highest ranked within LAC, provided that the applications attain all thresholds. Proposals must clearly indicate the region (Africa or LAC) they are applying to.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 300 000. At least 60% of the total requested EU contribution must be allocated to this purpose. EUR 300 000 is considered necessary to meet the requirements of the topic, cover costs to set up participatory initiatives in real-life sites, engage with and consult extensively stakeholders, and</p>

	demonstrate solutions to soil health challenges.
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Expected Outcome: Activities under this topic contribute to the eight specific objectives of the Mission ‘A Soil Deal for Europe’. Activities will also contribute to the EU-Africa Partnership on Food and Nutrition Security and Sustainable Agriculture (FNSSA), African Union strategies, the ‘Declaration of the EU-CELAC Summit 2023’²⁸⁴, the LAC Communication²⁸⁵, as well as other initiatives and action plans relevant for soil health and the support of global commitments such as the United Nations Sustainable Development Goals (SDGs), in particular in the areas of sustainable agriculture, food and nutrition security, biodiversity, and climate.

Project results are expected to contribute to all of the following expected outcomes:

- Soil degradation is minimized or reversed, and soil health is enhanced in rural, urban and peri-urban areas of Africa or Latin America and the Caribbean (LAC).
- Local communities and small land managers and land users in Africa or LAC have increased access to scalable practice-oriented tools and learning mechanisms for soil health, including monitoring, based on participatory research.
- Establishment of a recognised mechanism for exchange of soil health knowledge, of learning experiences and tools that can be replicated and that can attract additional finance to support human-centred design and testing of solutions for soil health.
- Policy makers can put in place an effective framework to support continuous generation and adoption of knowledge-based, context-specific solutions for soil health and sustainable land management in Africa or LAC.

Scope: Living labs have the potential to empower the transition towards healthy soils by closing the gap between science and practice. Three components are recognizable within the now well-established living labs research concept: (a) co-creation of solutions with a large set of stakeholders, (b) carried out in real-life settings and (c) involving the end-users. Living labs are thus collaborations between multiple actors that operate and undertake experiments on individual sites such as farms, forest stands, urban green or industrial areas, enterprises and other locations, where the work is carried out and monitored under real-life conditions.

Soil health gains require adapted, site-specific practices. However, providing millions of (small) land managers with access to regional or field-specific solutions and tailored advisory, remains challenging and requires new approaches. In particular, as the lack of feedback loops between land managers and researchers may lead to the development or implementation of inappropriate solutions or hinder the adaptation of solutions to local contexts.

Building on the abovementioned living labs principles, this topic aims to support the development of human-centred initiatives for research, development, education, extension and

²⁸⁴ See [Declaration of the EU-CELAC Summit 2023](#)

²⁸⁵ See [New Agenda to strengthen EU's partnership with LAC](#)

support sustainable soil management, with the final goal of accelerating and expanding the adoption of context-specific solutions for soil health protection and restoration in Africa and LAC. The Mission Soil living labs concept (see topic HORIZON-MISS-2025-05-SOIL-01: Co-creating solutions for soil health in Living Labs) is not expected to be replicated as such, but rather to inspire the exploration of new models and participatory initiatives that, based on the same principles, emerge from African and LAC soil-related communities as drivers of change in soil management.

Proposals should:

- Support the set-up of at least 12 participatory initiatives in real-life sites in at least 5 to 6 countries in each region (Africa or LAC). The participatory initiatives should co-design, co-develop and co-implement with all relevant actors, locally adapted solutions and holistic approaches to key soil health challenge(s) related with one or more of the Mission Soil specific objectives. The initiatives should cover a diversity of environmental, socio-economic and cultural contexts across the regions (Africa or LAC) and the proposed solutions should be adapted to these contexts. The initiatives should integrate knowledge and expertise from SSH disciplines.
- Support the participatory initiatives to monitor and assess the progress on soil health and socio-economic resilience derived from the implementation of the solutions. For this, adequate indicators (new or existing) should be used, and a baseline established.
- Support land managers, land users, advisers as well as any relevant actors involved in the participatory initiatives, to co-implement the solutions, by providing training, capacity building, knowledge exchange, etc. (e.g. sharing best practices, organising demonstration activities or cross-visits). Actors involved in the participatory initiatives should not be partners of the successful proposals funded under this topic.
- Identify initiatives that are exemplary in their performance on soil health improvement and can act as places for demonstration of solutions (similar to the Mission Soil lighthouse concept) to efficiently disseminate knowledge and accelerate the adoption, scale up and transferability of solutions and increase the impact on the ground.
- Develop an inclusive exchange mechanism among the established initiatives to enable a rapid peer-to-peer learning and a toolbox to support the adaptation and replication of these initiatives in other contexts by others. The exchange mechanism should operate as an incubator of new initiatives in at least 5 to 6 countries in each region (Africa or LAC) and be designed to allow geographical expansion and sustainability.
- Ensure long-term ambition, continuity, and sustainability of the established mechanism beyond the Horizon Europe funding, including through attracting other funding and identifying possible business models and actions involving local authorities, social economy entities and social enterprises business communities, SMEs, investors, entrepreneurs and philanthropic organisations.

Proposals should include expertise in human centred design, capacity to operate at regional level and deep understanding of the different environmental, socio-economic and cultural contexts as well as existing soil health needs and management practices in Africa or LAC. An effective contribution of social sciences and humanities (SSH) disciplines is essential to implement strong participatory initiatives, foster social innovation and enhance social, cultural and behavioural change.

Proposals must provide financial support to third parties to set up participatory initiatives addressing soil health in real-life sites in Africa or LAC. The recipients of the financial support must be the group of actors involved in the participatory activities in each initiative and include, for example, research organisations, land-managers, start-ups, SMEs, civil society organisations and/or other interdisciplinary actors. Recipients of financial support within one participatory initiative cannot be recipients of financial support in another participatory initiative under this same topic.

Proposals should define a transparent selection criterion for the FSTP calls. These criteria should consider: the recipients' ability to advise on or contribute to innovative, inclusive, agile research and implementation approaches; their expertise in human centred design; their capacity to operate at regional level; and their deep understanding of the context and existing soil health needs as well as soil health management practices in Africa or LAC.

Proposals should include a dedicated task, appropriate resources and a plan on how they will build on the results of and/or collaborate with related projects funded by philanthropic entities and other relevant actions under Horizon Europe (e.g. [Soils4Africa](#) and projects to be financed under topic 'HORIZON-CL6-2025-02-FARM2FORK-19: Developing agroecology living labs and lighthouses for climate action under the Food and Nutrition Security and Sustainable Agriculture (FNSSA) partnership', or 'HORIZON-MISS-2024-SOIL-01-09: Assessment of Soil Health in Africa').

Proposals should demonstrate a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the [European Union Soil Observatory](#) (EUSO) and the project [SoilWise](#). In particular, proposals should ensure that the data produced in the context of this topic is FAIR²⁸⁶ and that relevant data, maps and information can potentially be available publicly through the EUSO.

A Soil Deal for Europe: Other Actions

1. Mission Implementation platform²⁸⁷

The main tasks are to assist the European Commission (in particular the Mission Secretariat in DG AGRI) in implementing the Mission Soil. This will include:

- Supporting the overall coordination of activities under the various building blocks of the Mission.

²⁸⁶ Findable, Accessible, Interoperable and Reusable
²⁸⁷ **Mission Implementation platform**

- Providing support and opportunities to Mission Soil projects to create synergies and collaborate on relevant topics (e.g. via clustering activities).
- Monitoring and assessing activities funded under the Mission Soil and other relevant activities in quantitative and qualitative terms, including their impacts, and tracking progress towards the achievement of the Mission's targets, objectives and overall goal.
- Enhancing communication, outreach, and engagement with citizens and stakeholders in Member States, Associated Countries, and globally through events, training and knowledge exchange, maintenance and update of the Mission Soil Platform website, and communication products.
- Providing financial advisory and technical assistance to the European Commission, leveraging and scaling private funding, including philanthropy.

The contractor should ensure the continuity of activities developed under the service contract REA/2022/OP/0001 and its amendment.

This action supports the follow-up to the July 2023 [Communication on EU Missions assessment](#).

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 9.93 million from the 2025 budget

2. Specific Grant Agreement for a Living Lab Support Structure

Within the Framework Partnership Agreement (FPA) awarded under topic HORIZON-MISS-2022-SOIL-01-08: Framework Partnership Agreement (FPA) for a living lab network support structure, the selected consortium is invited to submit a proposal for a Specific Grant Agreement (SGA). This SGA will cover two years of the FPA (2026-2027). One single proposal should be submitted. **The evaluation committee will be composed fully by representatives of EU institutions.**

The support structure under this SGA should continue to implement the action plan presented under the FPA while building on the needs and gaps identified by the first SGA (SOILL-Startup), which is currently running (2024-2025) and the European Commission.

Proposed activities should:

- Give continuity to SOILL-Startup activities in terms of tailored support to Mission Soil funded living labs and lighthouses (LL & LH), in the form of advice in their day-to-day operations (including on technical, networking and communication aspects), capacity building, training and harmonized monitoring. The SGA should also provide selected services to other LL & LH working on soil health issues, created by other projects or by other programmes. Finally, the SGA should expand its activities to support emerging

soil health initiatives (including existing on the ground experiments), showing potential to develop in mature LL & LH.

- Facilitate the exchange of knowledge, data, findings and experiences within and across LL & LH (with a focus on, but not limited to, those funded under the Mission Soil) and with key stakeholders and other projects, where co-design, testing and evaluation of innovative soil management practices and technologies will take place. To this end, the SGA should continue identifying common areas of interest between funded LL & LH - particularly those operating in the same biogeographical regions-to engage them in concrete actions that create synergies and capitalise on the wealth of existing experiences and resources. Activities should result in the creation of working groups, in the production of learning material and tools addressing specific technical themes (e.g. particular soil challenges or land uses) as well as transversal aspects (e.g. data management, monitoring, use of digital tools, integration of social sciences and humanities (SSH) in research and innovation). The participation in or collaboration with working groups or project clusters, should be foreseen. In addition to enhancing operational capacities of living lab partners, the exchange of experiences should serve to promote a wider dialogue between the various living labs on their contribution to the Mission's objectives and to discuss possibilities for scaling up activities beyond the living lab areas.
- Support LL & LH projects in establishing a route towards open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the European Union Soil Observatory (EUSO) and the project [SoilWise](#). In particular, the SGA should contribute to the continuous flow of high-quality information on local soil health conditions to support Member States in implementing the future Soil Monitoring Law. Likewise, the SGA will help identify and disseminate sustainable soil management practices and solutions created, tested and demonstrated in LL & LH, so that these are widely known and can be accessed by potential users beyond the living lab areas. The SGA should also flag opportunities for the living labs to make use of data and services available from European Research Infrastructures federated under the European Open Science Cloud (EOSC) or from relevant Data Spaces, as indicated in the Soil Mission implementation plan.
- Promote the creation of new LL & LH by providing potential applicants with information, guidelines, recommendations and dedicated services (such as a helpdesk, a capacity building, mentoring programme and matchmaking tools) on the Mission's living lab concept and its implementation as well as with ideas for collaboration. To reach a wide audience and engage new stakeholders, the support structure should widely publicise its information, amongst others by organising targeted match-making events as a follow up to those carried out under the project [NATI00NS](#), notably in biogeographical regions with under-representation of living labs. Due attention shall be given to ensuring a balanced coverage of the growing network of LL & LH (from a thematic, biogeographic as land use point of view).

- Help LL & LH in developing strategies to sustain their activities beyond the lifetime of each project. This will include assisting living lab partners in the development of financial strategies and long-term management plans, as well as strengthening connections with local business communities, in particular SMEs, investors and other commercial stakeholders as well as social economy entities and social enterprises. To this end, the support structure should also assist applicants to LL topics to explore new public or private funding schemes and financial instruments, involving, where relevant, finance providers such as financial institutions and investors.
- Apply the “quality standards” developed under SOILL-Startup for the validation of LL & LH depending on their level of development and advance towards an acknowledgment certification. This should support harmonisation and comparability of approaches across LL & LH working in different settings and on different themes. Conduct a specific assessment of activities in sites that can potentially develop into lighthouses. Assist LL & LH in their transition towards acknowledgment by the Mission Soil providing the corresponding certification.
- Continue monitoring and assessing the performance of the LL & LH in a systematic way and report the main trends, achievements, experiences and challenges encountered when working within a living lab approach. The periodicity of the quantitative reporting should be agreed with the Mission Secretariat. A detailed qualitative evaluation of the progress of the funded living lab projects should be reported in a yearly basis. These reports should bring together and complement the information arising from monitoring activities performed by each of the funded living lab projects on their proposed solutions to identified soil health challenges. Close cooperation with the MSP regarding the reporting and monitoring requirements is essential to feed into their overall monitoring of the Mission, as the SGA will be the main contact point for the MSP to obtain high quality information and data on the performance of the living lab projects.
- Maintain and further develop the web-portal initiated by SOILL-Startup and other tools and services for information, dissemination, exchange of experiences and outreach, integrating and further developing existing information and resources. Through the provision of a collaborative space for LL & LH partners, the web-portal should support the establishment of a dynamic and inclusive community of practice.
- Maintain and further develop an interactive map of LL & LH initiatives building on and integrating the maps set-up by the project PREPSOIL and by SOILL-Startup. The map will contain all three categories of LL & LH above-mentioned: 1) those LL & LH funded under dedicated topics of the Mission Soil; 2) other soil health LL & LH created under other projects or other programmes that are aligned to the Mission Soil criteria; and 3) emerging and growing soil health initiatives (including existing on the ground experiments) showing potential to develop in mature LL & LH.
- Produce regular newsflashes and a 3-monthly electronic newsletter to support the evolving community of practice of LL. Communication and outreach should benefit LL

& LH operating as part of the Mission Soil or outside, as well as a wide range of stakeholders and the wider public.

- Offer training activities and capacity building for soil managers, landowners, advisors and relevant authorities on sustainable soil management practices, as well as activities to support soil education and citizen engagement, in line with and in support of the objectives of the future Soil Monitoring Law.
- Activities performed by the SGA should support all emerging and established LL & LH on soil health, regardless of their land use, biogeographical and thematic coverage.

Specific Conditions:

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the [General Annexes](#).

This action will be implemented through a Coordination and Support Action (CSA). Legal entities established in non-associated third countries may exceptionally participate in this coordination and support action.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Specific grant agreement awarded without call for proposals in relation to a Framework Partnership Agreement

Indicative budget: EUR 4.25 million from the 2025 budget

EU Missions' Joint Calls

Proposals are invited against the following topic(s):

HORIZON-MISS-2025-06-CIT-CANCER-01: Increasing walking and cycling: to reap health benefits, emission reductions and integrate active mobility and micro-mobility devices, with smart technologies and infrastructure

Call: Joint Call between the Climate-Neutral and Smart Cities Mission and the Cancer Mission	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply:</p> <p>At least five legal entities which are ‘lead cities’ and five legal entities which are ‘follower cities’²⁸⁸ must participate, as beneficiaries, each established in a different Member State or Associated Country. In addition, at least half of the ‘lead and follower’ city beneficiaries must be among the 112 cities selected for the EU Mission on Climate-neutral and Smart Cities²⁸⁹.</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B.

²⁸⁸ Lead cities and follower cities: In this context, lead cities possess experience and expertise in developing and integrating active mobility policies into sustainable mobility planning. Follower cities, on the other hand, are those with less experience in this area, aiming to replicate and build upon the successful approaches and best practices of the lead cities.

²⁸⁹ The EU Mission on Climate-Neutral and Smart Cities aims to deliver 100 climate-neutral and smart cities by 2030 and ensure that these cities act as experimentation and innovation hubs to enable all European cities to follow suit by 2050. On 28 April 2022, the Commission announced the 100 EU cities that will participate in the Mission. In addition, 12 cities have been selected from countries associated or expected to be associated the Horizon Europe programme.

<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ²⁹⁰.</p> <p>Grants awarded under this topic will be linked to the following action(s): HORIZON-MISS-2021-CIT-02-03</p> <p>Collaboration with the Cities Mission Platform ²⁹¹ is essential and projects must ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work plan of the proposal. The collaboration with the Mission Platform must be formalized through a Memorandum of Understanding to be concluded as soon as possible after the project starting date.</p> <p>In grants awarded under this topic, eligible costs for major infrastructure works related to the deployment/installment of the walking and cycling solutions should not constitute more than 20% of the total eligible costs. Beneficiaries' own resources and/or mobilisation and leverage of additional investments from other EU programs and initiatives (such as EU Structural and Investment Funds) and/or other sources, private or public, could make up the remaining investment costs to secure the economic and financial sustainability of the project.</p>
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Expected Outcome: Projects are expected to contribute to all the following outcomes:

- Cities advance in **achieving their climate neutrality targets** and reducing greenhouse gas emissions from transport by at least 15%, by promoting and implementing walking and cycling and by incorporating walking, cycling and micro-mobility infrastructure and services (e.g. bicycles, e-bikes and e-scooters) in multimodal transport networks;
- **Increased modal share** of walking and cycling in follower cities, in particular increased number of daily trips on foot and by bike, by at least 30%;

²⁹⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

²⁹¹ Set up by Horizon 2020 project NetZeroCities - Accelerating cities' transition to net zero emissions by 2030, Grant Agreement n. 101036519, and scaled up through topic *HORIZON-MISS-2021-CIT-02-03: Framework Partnership Agreement (FPA) for the Climate-Neutral and Smart Cities Mission Platform*.

- Increased **integration** of (e)bikes and -e-scooters (and other “intelligent” micromobility vehicles) through the **digital and green** road infrastructure by extending the work on Cooperative Intelligent Transport Systems (C-ITS) to them in order to increase their modal share as well as their safety;
- As a feedback to EU research, health and transport policy, a comprehensive EU guidance on increasing (1) walking, (2) cycling, and (3) micro-mobility in cities is developed, including:
 - o concrete measures for improving the quality, safety, quantity, continuity and attractiveness of pedestrian/walking and cycling infrastructure;
 - o improved integration of walking, cycling and micro-mobility in transport models and traffic management urban systems/traffic light management at local/regional/national level;
 - o concrete measures for industry and city planners to use smart technologies to bring about healthy behavioural change for getting more people into active modes of transport;
 - o support and guidance for urban transport authorities to establish partnerships with the relevant local/regional/national health authorities to promote active mobility projects and solutions that demonstrate quantified health benefits for the city population. In particular through implementation research on cancer prevention by increasing physical activity and reducing obesity and how walking and cycling can improve symptoms and side effects of cancer patients.

The expected outcomes should be supported by clear indicators with baselines and quantified targets which are monitored for each city. The expected outcomes should take into account expected technological and policy developments.

Scope: Mobility and transport are key components in every citizen’s life, especially in cities, regardless of their size and population density. However, transport is still a significant source of greenhouse gas emissions, air, noise, soil and water pollution. Congestion and scarcity of public space remain serious challenges to the efficiency of transport systems and reduce the liveability of affected areas at a considerable cost to society and the economy.

Active mobility modes, such as walking and cycling, represent a sustainable and healthy means of mobility, with considerable potential to support the decarbonisation of urban transport and help achieve the EU-wide target of reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990, and climate neutrality by 2050 in line with the European Climate Law²⁹².

²⁹² REGULATION (EU) 2021/1119 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 (‘European Climate Law’)

According to the WHO, physical inactivity, overweight and obesity are linked to many types of cancer²⁹³; regular physical activity, maintaining both a healthy body weight and diet can reduce the risk. Similarly, air pollution has been linked to several malignancies²⁹⁴, especially lung cancer²⁹⁵; an increase in the uptake of cycling and walking is a promising, low-cost, and equitable route to more physical activity, thus reducing the risk of cancer. Engaging patients in physical activity during or after cancer treatment can assist in recovery, reduce the incidence of second cancers and other chronic diseases, and improve survival²⁹⁶, thus improving their quality of life.

With the increase in numbers of active mobility users as well as the increasing use of micro-mobility devices²⁹⁷, improvements towards high-quality infrastructure, effective planning and preparation are required. This includes the preparation of cycling and walking infrastructure network plans, raising standards in design guidance documents, linking cycling and walking with other modes of transport, in particular public transport, and improvements in how the transport system and traffic flows are managed.

While cars are becoming more (inter-)connected, more work is needed to test how to bring e-bikes, e-scooters and micro-mobility devices, into the design of “smart” infrastructure through the measures of digitalization and connectivity of vehicles and infrastructure in the intelligent transport systems. Connected mobility / Cooperative Intelligent Transport Systems (C-ITS) are being developed but other road users of (e-)bicycles and e-scooters are yet to be integrated. Although some European cities have already tested use cases of bicycles in intelligent transport systems sector²⁹⁸, more efforts are needed to extend the work on C-ITS to them. Additional efforts should lead to increased safety via the digital road infrastructure and an increase in their modal share.

Proposals are therefore expected to address all of the following:

1) improve the quality, safety, quantity, accessibility, continuity and attractiveness of walking and cycling infrastructure by:

²⁹³ E.g. oesophagus, colorectal, breast, endometrial and kidney cancer. Excess body mass was responsible for 3.4% of cancers in 2012, including 110,000 cases of breast cancer per year.

²⁹⁴ Including lung cancer, urinary bladder cancer and acute leukaemia: the evidence is most abundant for lung cancer, for which several causal factors are well established (Samet JM, Cohen AJ (2006). Air pollution In Schottenfeld D, Fraumeni JF Jr, eds Cancer Epidemiology and Prevention, 3rd ed New York: Oxford University Press, pp 355-381)

²⁹⁵ Recent studies published in the AACR journal Cancer Epidemiology, Biomarkers and Prevention have demonstrated that fine particulate matter in the air may increase cancer-specific mortality in adult patients with early breast cancer and in paediatric and young adult patients with various cancers. Globally about 300,000 lung cancer deaths in 2019 were attributed to exposure to fine particulate matter, known as PM2.5 contained in air pollution.

²⁹⁶ McTiernan A, Friedenreich CM, Katzmarzyk PT, Powell KE, Macko R, Buchner D, Pescatello LS, Bloodgood B, Tennant B, Vaux-Bjerke A (2019) Physical activity in cancer prevention and survival: a systematic review. Med Sci Sports Exerc 51:1252–1261

²⁹⁷ Micro-mobility refers in this context to a growing range of small, lightweight vehicles options operating at speeds typically below 25km/h and mostly used for trips up to 10km. Micro-mobility vehicles can be personally owned or shared; electric or manual

²⁹⁸ [MegaBITS MegaBITS | Interreg North Sea](#); [Final Remarks on the BITS Project, Interreg VB North Sea Region Programme](#)

- Providing an updated state of the art of the uptake of walking and cycling policies, programmes and projects in urban, transport, research, and health strategies and plans as well as of their socio-economic, environmental and health benefits resulting from their demonstrated potential in emission reduction.
- Preparing cycling and walking infrastructure network plans which foster multimodality by linking cycling and walking with other modes of transport, in particular public transport, and by improving network and traffic flow management.
- Develop case studies and identify best practices particularly focused on quality, safety, quantity, accessibility, continuity and attractiveness of walking/pedestrian and cycling infrastructure.

2) improve integration and modal share of active mobility:

- Developing a case study to identify how walking and cycling can help to improve symptoms and quality of life of cancer patients.
- Looking at the integration of walking and cycling policies and projects in urban development, transport-research and health strategies and plans through a comparative analysis across at least 10 EU cities, selected by taking into account geographical balance, size and population as well as different levels in the uptake of active mobility.
- Demonstrating in new and/or existing living labs innovative solutions to increase the modal share of active mobility, including through testing tactical urbanism measures in real-life urban spaces.
- Test behavioural change regarding the uptake of walking and cycling among different populations through implementation research. Identify and address specific bottlenecks and barriers that prevent the uptake of behavioural change.
- Fostering the exchange of knowledge, experience and best practices about the implementation and upscale of innovative solutions for walking and cycling that could be replicated and upscaled among cities.
- Supporting the development of local, regional and national active mobility policies, and their implementation across cities participating in the action, leading at least to a 30% increase in the modal share of walking and cycling within follower cities and thus contributing to the implementation of related EU policies and in particular of the European Declaration on Cycling²⁹⁹.

3) use smart technologies and integration in traffic management systems/traffic light management at local/regional/national level, including in the new “smart” infrastructure:

- Exploring conditions and infrastructure requirements for the integration of e-bikes and micro-mobility devices in traffic management systems/traffic light management.

²⁹⁹

[EUROPEAN DECLARATION ON CYCLING \(C/2024/2377\)](#)

- Identifying and testing use cases to extend connected vehicles technology (C-ITS) to cycling, micro-mobility, bike sharing etc. to enhance the contribution of these transport modes to a sustainable urban mobility system.
- Exploring conditions for a wider uptake of smart technologies in the cycling/micromobility sector taking into account the latest legislative developments³⁰⁰ and building on results from previous European R&I projects³⁰¹.

4) coordination/exchange/capacity building for increasing the uptake of active mobility by:

- Supporting further coordination, exchange of experience and best practices, including training and capacity building activities, as well as co-creation and citizens engagement activities, taking into account the different levels of experience and development of walking and cycling strategies across Europe.
- Involve a variety of actors, including e.g. local/regional/national transport, research and health authorities, cancer charities, academia, public transport authorities and operators, urban mobility practitioners, shared mobility service providers, citizen associations, stakeholder organisations, and industry associations and representatives.

The topic requires proposals from consortia that include at least five ‘lead cities’ and five ‘follower cities’, each established in a different Member State or Associated Country, reflecting a sound geographical balance. The consortia should bring together local authorities and other relevant stakeholders to jointly test and implement packages of technological and non-technological innovations and policy-based measures.

This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Projects selected through this topic will contribute to the implementation of EU policies and strategies fostering sustainable urban mobility such as the European Green Deal³⁰², Sustainable and Smart Mobility Strategy³⁰³, New Urban Mobility Framework³⁰⁴, Recommendation on national SUMP support programme³⁰⁵ and in particular active mobility, including the EU Declaration on Cycling³⁰⁶, as well as contributing to the implementation of

³⁰⁰ E.g. revised Delegated Regulation on EU-wide multimodal travel information service (MMTIS: https://ec.europa.eu/commission/presscorner/detail/en/qanda_23_6112); ongoing work on building the European Mobility Data Space ([Passenger Mobility Package - European Commission \(europa.eu\)](#)) and the revised ITS Directive ([Directive - EU - 2023/2661 - EN - EUR-Lex \(europa.eu\)](#))

³⁰¹ E.g. BITS – Bicycle and ITS: [BITS, Interreg VB North Sea Region Programme](#)

³⁰² The European Green Deal, COM(2019) 640 final

³⁰³ Sustainable and Smart Mobility Strategy – putting European transport on track for the Future, COM(2020) 789 final

³⁰⁴ The New EU Urban Mobility Framework, COM(2021) 811 final

³⁰⁵ COMMISSION RECOMMENDATION (EU) 2023/550 of 8 March 2023 on National Support Programmes for Sustainable Urban Mobility Planning (notified under document C(2023) 1524)

³⁰⁶ EUROPEAN DECLARATION ON CYCLING (C/2024/2377)

the Mission on Cancer³⁰⁷ and Europe's Beating Cancer Plan³⁰⁸ in particular promoting active mobility as effective mean of cancer and obesity prevention and to the implementation of the Zero Pollution Action Plan³⁰⁹, its targets for 2030 and the relevant Flagship Initiatives, in particular the reduction by more than 55% the health impacts (premature deaths) of air pollution and by 30% the share of people chronically disturbed by transport noise, with numerous co-benefits in other areas.

Proposals should plan for an active collaboration amongst the projects selected under this topic - for dissemination, evaluation and coordination - facilitated by and within the CIVITAS³¹⁰ initiative through the signature of a Memorandum of Understanding. Proposals should ensure that appropriate provisions for activities and resources aimed at enforcing this collaboration are included in the work-plan. Detailed description of the specific activities and common actions that will be undertaken is not required at proposal stage and can be further defined during the grant agreement phase. Collaboration with the Mission Platform (HORIZON-MISS-2021-CIT-02-03) is essential and should take place through the CIVITAS initiative. The latter should establish, through a collaboration agreement, clear links with the Mission portfolio for synergies and complementarities. The Commission will facilitate Mission-specific coordination through future actions, notably fostering exchanges with other proposals. Hence, successful applicants will be asked to join the 'Prevention' cluster for the Mission on Cancer, established in 2022³¹¹. In this regard, the Commission will take on the role of facilitator, including with relevant initiatives and stakeholders, if appropriate. Collaboration with the Driving Urban Transitions (DUT) partnership is recommended.

Proposals should take stock of existing work developed in relevant EU and/or national projects, build on the results of existing studies³¹². In order to ensure complementarity in particular on road safety related aspects, projects awarded under this topic will be invited to liaise and collaborate with the projects that will be selected under topic Horizon-2025-D6-12 "Safety of Cyclists, Pedestrians and Users of other Micro-mobility Devices".

³⁰⁷ [470f388c-1b44-43a1-87f5-cf9119ee0251_en \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:470f388c-1b44-43a1-87f5-cf9119ee0251)

³⁰⁸ Europe's Beating Cancer Plan, COM(2021) 44 final

³⁰⁹ Pathway to a Healthy Planet for All, EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil', COM(2021) 400 final

³¹⁰ <https://civitas.eu/>

³¹¹ In order to address the objectives of the Mission on Cancer, participants will collaborate in project clusters to leverage EU-funding, increase networking across sectors and disciplines, and establish a portfolio of Cancer Mission R&I and policy actions.

³¹² E.g. results from projects funded under the calls: [MG-4.1-2017](#); [LC-MG-1-3-2018](#); [MG-7-2-2017](#); [MG-5.3-2014](#) as well results from the study supported through the call for tender "[THE DEVELOPMENT OF CROSS-BORDER CYCLING LANE INFRASTRUCTURE - EC-MOVE/2024/OP/0029](#)"

EU Missions' Cross-cutting activities

EU Missions aim to address some of the greatest challenges facing our society. They are bold and inspirational with clear objectives that are time-bound, realistic, measurable and targeted. Grounded in research and innovation, EU Missions drive systemic solutions and societal transformation. Achieving these goals often requires broad societal engagement—moving beyond dialogue to concrete action. This includes the active participation of citizens, academics, entrepreneurs, social partners, and public administrators as co-designers, co-developers, and co-implementers.

To support these efforts, cross-cutting activities play a fundamental role by fostering synergies across different mission areas, responding to emerging needs, and testing innovative approaches. These activities are not confined to a single EU Mission but instead provide strategic, horizontal support, accelerating progress and addressing societal challenges at scale.

In this context, proposals for topics under this call should outline a credible pathway to contributing to the overarching objectives of EU Missions, ensuring impactful and transformative outcomes. These cross-cutting activities are complemented by other actions not subject to calls for proposals and cross-cutting policy priorities in Horizon Europe.

The three topics included act on the objective to move towards scaling-up at this stage of EU Missions implementation. Among the expected impacts, they include:

- A better understanding of the skills needed to implement the EU Missions' objectives, and strengthened institutional capacity to create a favourable environment to deploy the most relevant solutions
- A clearer overview of the factors hampering the deployment of EU Mission-produced solutions, and explore ways to overcome them
- The creation of lead markets for mission-driven technologies that also support economic competitiveness, fostered by demand-driven innovation and integrating Social Sciences and Humanities (SSH) in defining strategic pathways

The instruments used are multiple to support more than one way to achieve societal impact. Combining a Coordination and Support Action (CSA), an Innovation Action (IA), and a Research and Innovation Action (RIA) ensures that all stages of the innovation process are covered and taken into account and that the outputs of projects reach many stakeholders. The diversity of approaches can also be leveraged to cross-feed the proposed activities, using the created insights to complement each foreseen actions.

Proposals are invited against the following topic(s):

HORIZON-MISS-2026-07-CROSS-01: Strengthening skills and capacity for the deployment of EU Missions

Call: Cross-cutting activities	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>

Expected Outcome:

- Local authorities, including those not directly participating in the action, have a better understanding of required skill sets and expertise to more effectively participate in EU Missions and accelerating the deployment of solutions.
- Increased uptake and scaling of innovations, fostering a culture of experimentation and impact-driven action.
- Enhanced collaboration and knowledge exchange across regions, strengthening the overall implementation of the EU Missions.

Scope: This call aims to strengthen research-driven capacity-building and institutional readiness to accelerate the deployment of innovative solutions in support of the five EU Missions. By identifying skills gaps, enhancing capacity within local authorities, and fostering experimentation and innovation at the local level, this action will empower key actors to fully leverage the Missions' potential.

Proposals should address the following key areas:

- **Skills inventory and gap analysis:** conduct a comprehensive assessment of required and desirable skills and capacities relevant to the implementation of the EU Missions. Develop and promote methods to identify gaps, barriers and training needs across sectors and stakeholders, ensuring alignment with the specific challenges of diverse missions.

- Specific capacity building activities with local authorities should be undertaken to co-create and validate the methods and materials to be developed related to skills mapping and skills gap analysis for the deployment of innovative solutions. Such capacity building activities may take the form of targeted training programmes, peer-learning networks, and mentoring schemes for local authorities to build up skills and knowledge necessary to deploy innovative solutions, engage stakeholders, and mobilize funding for Mission-related activities.

HORIZON-MISS-2026-07-CROSS-02: Understanding and overcoming barriers to the scale-up of innovations supporting EU Missions

Call: Cross-cutting activities	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p>

Expected Outcome:

- The missions' stakeholder communities are better aware of the diversity of risk perception and risk management strategies related to technological and non-technological innovations among them.
- European, national, regional and philanthropic funders can better address barriers (socio-technical, economic, cultural, and regulatory) to the achievement of mission objectives by strengthening stakeholder groups' specific risk management strategies.
- Improved understanding and removal of barriers to scaling up innovative solutions relevant to EU Missions.

Scope:

This call aims to identify and address the barriers preventing the scaling and deployment of innovative technologies and non-technological innovations that support the five EU Missions in achieving their objectives. The analysis should notably consider how the risk perception and risk management strategies of diverse stakeholder groups affects the scalability of innovations in the context of EU Missions. By integrating insights from Social Sciences, and Humanities, projects will explore socio-technical, economic, cultural, and regulatory challenges to unlock the full potential of existing, performant but underutilised solutions.

This call invites research-led interdisciplinary consortia to investigate the barriers (socio-technical, economic, cultural, and regulatory) that impede the scaling of technological and non-technological solutions. The projects activities shall cover all five EU Missions.

- Proposals should create a better understanding of socio-technical barriers based on investigations of risk perception and risk management related to technological and non-technological innovations. This shall include risk perception and risk management in regulatory and governance bodies, and the identification of socio-technical path dependencies in the context of missions. This shall include, without being limited by: Exemplary assessment of stakeholders perception of the social, economic, and environmental effects of innovations in missions settings.
- Exemplary assessment of examples of behavioural and systemic change as a result of shifting patterns of thought of risk and risk management and action, and experiment with new ways to drive transformation.
- Analyses of the role of experimentation (including by ‘culturally aware and emotional nudging’) to change risk perception and management as means of knowledge production and communication.

Projects should feed their insights to other EU mission projects, including those working on the topic “Advancing lead markets and proof-of-concept for deep tech solutions contributing to EU Missions.”

HORIZON-MISS-2026-07-CROSS-03: Advancing lead markets and proof-of-concept for deep tech solutions contributing to EU Missions

Call: Cross-cutting activities	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Innovation Actions

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).</p> <p>The specific conditions for actions with PCP/PPI procurements in section H of the General Annexes apply to grants funded under this topic.</p>
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Expected Outcome: **Expected outcomes:**

- Stakeholders in Missions on European, national and regional level embrace their roles as actors in ‘*lead markets for innovative products and services with a purpose*’ that are provided by public investments in mission objectives.
- Some cutting-edge technologies at lower technology levels (i.e. not yet at product development stage) potentially relevant to EU Missions are advanced towards market entry by appropriate tools (for example ‘proof concept’, ‘procurement of innovation’ or others)
- A better alignment between public procurement, private investment, and missions’ requirement fosters favourable conditions for creation of lead markets.

Scope:

This call aims to accelerate the scaling and deployment of innovative technologies by leveraging EU Missions as catalysts for lead markets. It will support both public and private stakeholders in fostering demand-driven innovation while developing proof-of-concept for deep tech solutions relevant to the Missions. By integrating Social Sciences and Humanities insights, the call will also address barriers to market uptake, risk perception, and stakeholder engagement to create enabling conditions for investment in high-impact technologies.

Proposals should aim at:

- Scaling up innovations: develop proof-of-concept for deep tech solutions that have the potential to address EU Mission challenges (up to TRL 7).
- Enabling lead markets for mission-driven technologies: identify and test models that mobilise public and private stakeholders to create demand for emerging solutions, ensuring alignment with public interests (e.g., workplace safety, risk management, procurement strategies).
- Mobilising resources to experiment innovative procurement and financing models - like procurement of innovation, competitive dialogue or other innovation friendly procurement methods - to develop and test innovative regulatory, policy, and financial

mechanisms to accelerate the uptake of high-risk, high-reward technologies in public services markets.

Maximum 50% of the grant awarded can be used to support actual procurement of solutions by public service companies preferentially in small projects and supporting maximum of 25% of the procurement. Prior agreement with EU commission services is required in due time.

Projects should take into account relevant insights from the projects working on the topic “Understanding and overcoming barriers to the scale-up of technologies supporting EU Missions.”

Projects should cover ideally all missions, and preference will be given to proposals covering several missions.

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Other Actions ³¹³

Public procurements

1. Strengthen EU Missions as a policy instrument

The objective of this action is to ensure the follow up to the July 2023 Communication on EU Missions assessment³¹⁴. It contributes to addressing the challenges still faced by EU Missions in the following areas identified in the exercise, particularly in improving EU Missions' monitoring and governance. Additionally, it focuses on raising awareness and enhancing engagement among citizens and stakeholders in the EU Missions.

Action may include:

- Strengthening the monitoring of all EU Missions, including supporting the preparation of the next assessment of EU Missions e.g. via data collection, data analysis, data visualisation, reporting on results and other relevant activities.
- Developing a dedicated joint portal for all EU Missions that would provide the public with a single-entry point to access key elements for each Mission in a harmonised format;
- Further exploiting the Horizon Results Platform and results from other EU programmes for EU Missions, including by providing advisory services that would help connecting results owners to missions' actors;
- Developing series of communication and dissemination activities to inform citizens and stakeholders on the activities of the EU Missions;
- Organising interactive in person and online events to engage citizens in the development of Missions' initiatives in the Member States and Associated countries.

Up to 4 procurements, possibly under existing framework contracts, might be funded under this topic.

This action supports the follow-up to the July 2023 Communication on EU Missions assessment.³¹⁵

Form of Funding: Procurement

Type of Action: Public procurement

Indicative timetable: Q3-Q4 2025

³¹³ The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

³¹⁴ COM(2023) 457 final and SWD(2023) 260 final

³¹⁵ COM(2023) 457 final and SWD(2023) 260 final

Indicative budget: EUR 4.00 million from the 2025 budget

Indirectly managed actions

1. Strengthen evidence-informed policy making for mission-oriented innovation

Expected outcomes:

The action would be expected to provide:

- Mission-oriented innovation policies' theory and policy recommendations;
- Support to the EU Missions implementation;
- A Missions community of practice.

Expected impact:

- Evidence-informed policy for EU Missions and potential future mission-oriented policy initiatives;
- Stronger eco-system for sustained mission performance.

Scope:

Public policy should be equipped with a sound system of evidence collection and dissemination, which is the basis of continuous learning, improvement and ultimately evidence-informed policy making. As EU Missions are focused mainly on the implementation and delivery against their objectives, a feedback loop providing the latest evidence and state of the art on the theories and practices is needed to support these new instruments.

This includes:

- Providing regular reports on mission-oriented innovation policies' theory and good practices,
- Supporting the European Commission in indicator development, data collection and analysis, notably on evolutions in policies and relevant measures of progress and impact,
- Helping to develop new methodologies for pooling, processing and analysing the large amounts of information that are at the basis of portfolio management and link to monitoring,
- Building a community of practice (including mutual learning, workshops, forums and skills development) around mission-oriented innovation,
- Providing policy recommendations for EU Missions and potential future mission-oriented policy initiatives.

The Commission will cooperate with the OECD to set up this system to underpin evidence-informed policy making. The OECD has unique access to countries where missions have been developed and expertise in the mission-oriented innovation policies. The proposed action would build on the recently completed study³¹⁶, and engage with the national EU Missions support structures, notably via the community of practice.

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative timetable: Q3 2025-Q4 2029

Indicative budget: EUR 4.00 million from the 2025 budget

Other budget implementation instruments

1. Commission expert groups: Mission Boards

The Mission Boards experts provide advice, which supports the work of the European Commission in the implementation phase of EU Missions for Horizon Europe.

The experts included in the Mission Boards are required to provide advice based on deep knowledge on fields corresponding to the implementation of mission oriented programmes corresponding to those of the missions, including knowledge in business, economic, cultural, social and environmental programmes, research and innovation and expertise in cross-sector/cross-border collaboration, governance, citizen engagement etc., as well as country and regional interests. It includes advice on achieving synergies between Horizon Europe missions and other EU programmes and policy areas, and with similar style missions at the national level, taking into account the international research and innovation field.

The advisory role of the Mission Boards is very closely managed in support of the dialogue with the Member States and countries associated to Horizon Europe, and prevent conflict of interest and respect confidentiality notably when pertaining to the Horizon Europe work programme and on evaluation aspects.

The Mission Boards provide high-level advice to the Commission of such a nature that without their input the implementation of missions would not achieve the desired large scale and breadth of impact. In light of this, and as highly qualified, specialised, independent experts, it is justified that the members of the Mission Boards are remunerated for the services they offer pursuant Article 21 of the Commission's horizontal rules on expert groups ('the horizontal rules')³¹⁷.

A special allowance of EUR 450/day will be paid to the Mission Board experts appointed in their personal capacity who act independently and in the public interest. This amount is

³¹⁶ European Commission Decision C(2022)2975 of 10 May 2022, OECD Benchmarking Study on Missions Implementation, Horizon Europe Work Programme 2021-2022, 12. Missions

³¹⁷ C(2016) 3301

considered to be proportionate to the specific tasks to be assigned to the experts, including the number of meetings to be attended and possible preparatory work³¹⁸.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative timetable: Q2 2025

Indicative budget: EUR 1.50 million from the 2025 budget

2. Use of individual experts: Mission Board Chairs

The Mission Boards Chairs (one Chair per Mission Board) have been appointed by the Director-General of DG RTD in agreement with other relevant Commission services, in order to maintain a degree of continuity with the previous Mission Boards. They are required to provide advice based on deep knowledge on fields corresponding to the implementation of mission oriented programmes corresponding to those of the missions above, including knowledge in business, economic, cultural, social and environmental programmes, research and innovation and expertise in cross-sector/cross-border collaboration, governance, citizen engagement etc., as well as country and regional interests. It includes advice on achieving synergies between Horizon Europe missions and other EU programmes and policy areas, and with similar style missions at the national level, taking into account the international research and innovation field.

The Chairs support and coordinate the work of the Mission Boards. The Chairs are also in charge of steering the work of the Mission Board according to its specific mandate. The Mission Board Chairs do not have a decision-making or executive role.

The advisory role of the Chairs is very closely managed in support of the dialogue with the Member States and countries associated to Horizon Europe, and to respect conflict of interest and confidentiality notably when pertaining to the Horizon Europe work programme and on evaluation aspects.

The Mission Boards Chairs provide high-level advice to the Commission of such a nature that without their input the implementation of missions would not achieve the desired large scale and breadth of impact.

A special allowance of EUR 450/day will be paid to the experts appointed in their personal capacity who act independently and in the public interest.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative timetable: Q3 2025

³¹⁸

C(2016) 3301

Indicative budget: EUR 0.12 million from the 2025 budget

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Budget^{319 320}

	2025 Budget (EUR million)
Calls	
HORIZON-MISS-2025-01	113.65
HORIZON-MISS-2025-02	117.45
HORIZON-MISS-2025-03	120.00
HORIZON-MISS-2025-04	41.00
HORIZON-MISS-2026-04-PCP	37.00
HORIZON-MISS-2025-05	73.00
HORIZON-MISS-2025-05-two-stage	48.00
HORIZON-MISS-2025-06	12.00
HORIZON-MISS-2026-01	11.00
Other actions	
Public procurement	30.49
Provision of technical/scientific services by the Joint Research Centre	0.50
Grant to identified beneficiary according to Financial Regulation Article 195(e)	0.16
Specific grant agreement	34.89
Indirectly managed action	22.65
Expert contract action	1.62
Estimated total budget	663.41

³¹⁹ The budget figures given in this table are rounded to two decimal places.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

³²⁰ The contribution from each Cluster to the Missions work programme part for the year 2025 is the following: EUR 129.14 million for Cluster 1, EUR 16.80 million for Cluster 2, EUR 11.51 million for Cluster 3, EUR 100.77 million for Cluster 4, EUR 239.20 million for Cluster 5 and EUR 153.39 million for Cluster 6. Additionally, the overall budget for this Work Programme part includes EUR 6 million from Cluster 6 and EUR 12 million from Cluster 4, while the Mission budget contributes by EUR 5 million to the Cluster 5 Work Programme part.

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**Horizon Europe
Work Programme 2025**

13. New European Bauhaus Facility

IMPORTANT NOTICE:

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

This draft is made public before the adoption of the work programme to provide potential participants with the currently expected main lines of this work programme. Only the adopted work programme will have legal value.

The adoption of the work programme will be announced on the Horizon Europe website and on the Funding and Tenders Portal.

Information and topic descriptions indicated in this draft may not appear in the final work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

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Introduction

The [New European Bauhaus](#) (NEB) was launched in 2021, striving to translate the European Green Deal¹ into tangible change on the ground. This policy and funding initiative was further strengthened in the political guidelines for the European Commission 2024-2029 under the goal *Supporting people, strengthening our societies and our social model*.

The political guidelines² highlight that the NEB can bring sustainability together with inclusion and affordability, and creativity with innovation. Challenges like the housing crisis or the green transformation are addressed by putting people's needs first, with the goal to improve their lives. The NEB also contributes to creating lead markets for the Clean Industrial Deal by considering embodied greenhouse gas emissions. To this end, the NEB fosters the development of innovative solutions in the built environment³ and beyond.

Against this backdrop, the NEB Facility is a multi-annual (2025-2027) and cross-cutting tool to revitalise European neighbourhoods with design for sustainability and inclusion. It will support projects on the sustainable transformation of the built environment. The NEB Facility aims to make the inhabitants of the built environment partners of change.

Activities under the NEB Facility should contribute to the wider social acceptance of the innovative solutions developed, accelerating the just green and digital transformation and strengthening and restoring citizens' trust in democracy. They should also explore the built environment's function in the conservation and restoration of natural ecosystems, its relation to historical urban, peri-urban or rural areas, the improvement of social cohesion as well as people's health and well-being. The NEB Facility is composed of a research and innovation (R&I) component and a roll-out component.

The R&I component will cover fundamental research, testing and demonstration. It will be implemented as a cross-cluster issue in the Horizon Europe Work Programmes with an indicative budget of €120 million per year for the period 2025-27. The roll-out component of the NEB Facility will seek to facilitate the uptake, further development and deployment of new knowledge, methods, approaches and technologies developed under the R&I component. The roll out component will also include all actions delivered under EU programmes that contribute to the goals of the Facility and particularly the implementation of the NEB values and principles⁴ at the neighbourhood level. It will build further on the projects and experiences from the first three years of the NEB.

¹ The targets of the European Green Deal were established in the [European Climate Law](#) (Regulation 2021/1119), the [Renovation Wave](#) (COM/2020/662 final), the [EU's new circular economy action plan](#) (COM/2020/98 final), the [EU zero pollution action plan](#) (COM/2021/400 final), the [EU industrial strategy](#) (COM/2020/102 final), the [EU bioeconomy strategy](#) (COM/2018/673 final), and the [EU Bioeconomy Strategy Progress Report: Stocktaking and future developments](#).

² European Commission: Directorate-General for Communication & Luyen, U. (2024). *Europe's choice : political guidelines for the next European Commission 2024–2029*, Publications Office of the European Union. <https://data.europa.eu/doi/10.2775/260104>

³ See definition in the glossary.

⁴ See definitions in the glossary.

The commitment and the support of innovative solutions are rooted in the three intertwined NEB values: **sustainable**, **inclusive** and **beautiful**.⁵ Sustainability is about prioritising the needs of all life forms and of the planet by ensuring that human activity does not exceed planetary boundaries⁶ which define a safe operating space for humanity based on the intrinsic biophysical processes that regulate the stability of the Earth system.⁷ Inclusion means granting and securing equal access to opportunities and resources for all and encouraging exchanges across cultures, genders, ages, and socioeconomic groups. Beautiful refers to projects that are genuinely attentive to their context which includes arts and culture, quality, diversity and heritage.

In addition to these three values, a NEB project should embrace three working principles: **participatory process**, **multi-level engagement** and **transdisciplinary approach**. All three working principles should foster co-creation and co-development. Participatory processes ensure that stakeholders have a voice in projects that affect them in addressing transformational change. Multi-level engagement implements an effective exchange between public and private peers and others who operate on a different scale, bridging the local and global dimension. Transdisciplinary approaches aim for higher integration of formal and informal knowledge and go beyond technical disciplines. They address in particular social, artistic and design expertise. They should ground scientific expertise in society by drawing on the knowledge of non-academics, the public, and public administrations. Architects or designers, for instance, can play a role of facilitators to integrate different actors and disciplines. Within the scientific field, the social sciences, arts and humanities (SSAH) will play an important role in the R&I component of the NEB Facility to emphasise the holistic nature.

In order to foster dialogue, collaboration, and creativity, bringing together different disciplines and different stakeholders, the NEB relies on **four thematic axes**⁸ which link the initiative to the people and their interests, needs and motivations. The first axis is about **reconnecting with nature** and going beyond a human-centred to a life-centred perspective. The second one is about regaining a **sense of belonging** and magnifying and linking collective and private experiences and building bridges between people. The third axis is about prioritising the **places and people most in need** and ensuring that beauty and sustainability are **affordable and accessible to all**. The fourth axis is about the need for **long-term, lifecycle thinking** in the circular economy and tackling unsustainable use of resources, including obsolete buildings or infrastructures, and waste.

⁵ See the definitions of the three NEB values in the glossary and, for more detailed information on the values, principles and axes, the and the [NEB Investment Guidelines](#), [NEB Compass](#) and the [NEB Investment Guidelines](#).

⁶ Bianchi, G., Pisiotis, U., & Cabrera Giraldez, M. (2022). *GreenComp. The European sustainability competence framework* (Y. Punie and M. Bacigalupo, Eds.). Publications Office of the European Union. <https://doi.org/10.2760/13286>

⁷ Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., Bigggs, R., Carpenter, S. R., de Vries, W., de Wit, C. A., Folke, C., Gerten, D., Heinke, J., Mace, G. M., Persson, L. M., Ramanathan, V., Reyers, B., & Sörlin, S. (2015). Planetary Boundaries: Guiding human development on a changing planet. *Science*, 347(6223). <https://doi.org/10.1126/science.1259855>

⁸ See definition in the glossary.

By adopting the NEB's integrated approach, the NEB Facility seeks to contribute to new solutions and potentially new ways of policymaking: bottom-up and closer to people's needs. This approach fosters the active participation of inhabitants and the integration of arts and culture in transformation processes. The focus is on neighbourhoods, which are close to people's surroundings and daily experiences. Incorporating neighbourhood specificities in planning initiatives and decision-making processes helps to effectively address local-level problems.⁹

The knowledge produced by NEB projects, the NEB Community and other relevant NEB actions will be collected, centralised, managed and monitored in a New European Bauhaus Hub. This will give an overview of all the knowledge produced, the progress made, the challenges faced and the research gaps yet to overcome. Thereby, the Hub will contribute to informing the implementation of the NEB Facility and will help to increase its impact. In the upcoming years and following work programmes after 2025, the Hub will be essential to facilitate potential synergies and joint actions between the NEB Facility and other projects.

NEB Facility: R&I component

Activities under the NEB Facility's R&I component in this work programme will contribute to all Key Strategic Orientations (KSOs) defined by the Horizon Europe Strategic Plan 2025-2027.¹⁰

- *KSO 1: Green transition:* Horizon Europe R&I activities must support Europe to become the world's first climate-neutral continent by 2050 and to tackle biodiversity loss and pollution. At least 35% of Horizon Europe's resources are committed to be spent on climate action and 10% for 2025-2027 on biodiversity action.
- *KSO 2: Digital transition:* Investment in R&I in key digital technologies is crucial for improving Europe's competitiveness in the digital value chain. The green and digital transitions are intertwined and expected to mutually benefit each other. In 2021-2027, it is agreed to invest at least EUR 13 billion from Horizon Europe in core digital technologies.
- *KSO 3: A more resilient, competitive, inclusive, and democratic Europe:* Europe's social rights and democratic values and principles need a strong foundation so they can be promoted globally. Horizon Europe research activities will help provide this foundation. This includes research on civil security, on a fair and environmentally-friendly economic model, on health and wellbeing and on democratic participation.

To contribute to these programme-level KSOs, the NEB Facility's R&I component will deliver on several specific expected impacts as defined in the Horizon Europe Strategic Plan 2025-2027. In this part of the 'main' work programme 2025, each destination of the R&I

⁹ Baffoe, G. (2019). Understanding the Neighbourhood Concept and Its Evolution: A Review. *Environment and Urbanization ASIA*, 10(2), 393-402. <https://doi.org/10.1177/0975425319859115>

¹⁰ European Commission, Directorate-General for Research and Innovation (2024). *Horizon Europe strategic plan 2025-2027*. Publications Office of the European Union. <https://data.europa.eu/doi/10.2777/092911>

component will deliver on three to four expected impacts as outlined in the list below. This destination-based work programme structure follows a thematic centre-of-gravity approach, but activities within a destination may be of cross-cutting nature and will often contribute to several expected impacts. The specific contribution to the overall expected impacts is explained in the introductory text of each destination, as well as now outlined below.

1. Connecting the green transformation, social inclusion and local democracy

Efforts to address socio-economic inequalities, environmental challenges, and improve transparency of public authorities must go hand in hand with engaging and fostering an open dialogue to rebuild citizens' trust in local democracy.

Reestablishing a strong connection between people and democratic institutions will be key to implement changes required by the green transition and avoid a “geography of discontent”. Places that are stuck in a development trap and where inhabitants feel left behind are faced with disengagement and discontent in the long term.¹¹

This Destination especially embraces activities that address sustainability and inclusiveness, paying particular attention to vulnerable groups. It aims at increasing the trust of people in the green transition and democracy through innovative participatory processes and governance models that balance public and private interests. Culture, cultural diversity, and identities possess a key role and potential in this process by enabling the involvement and participation of all.

This Destination delivers on the expected impacts 8 *Realising the full potential of cultural heritage, arts, and cultural and creative sectors*, 10 *Boosting inclusive growth and reducing vulnerabilities*, 31 *Sustainably developing rural, urban and coastal areas*, and 32 *Developing innovative governance models and tools enabling sustainability and resilience* in the Strategic Plan 2025-2027.

2. Circular and regenerative approaches for the built environment

The development of a European circular and regenerative ecosystem for the built environment is key to reach our climate goals, support the competitiveness of the sector and the EU's strategic autonomy. At the same time, it is crucial to ensure peoples' acceptance of, support for, and active engagement in the necessary transformations.

This Destination aims to make the built environment more sustainable, circular, regenerative, climate-resilient and less polluting. To this end, innovative and regenerative designs¹², architecture, products, materials and approaches will be developed, considering also the role digital technologies can play. Efforts will be made to make solutions beautiful and respectful of the local perspectives and cultures, contributing to increase inhabitants' acceptance of the transformative innovations developed.

¹¹ Rodríguez-Pose, A., Dijkstra, L., & Poelman, H. (2023). The geography of EU discontent and the regional development trap. *Working Papers*, 3. <https://doi.org/10.2776/164290>

¹² See definition in the glossary.

This Destination delivers on the expected impacts 2. Living and working in a health-promoting environment, 15 *Achieving global leadership in climate-neutral, circular and digitised industrial and digital value chains*, 28 *Putting biodiversity on a path to recovery, and protecting and restoring ecosystems and their services*, and 31 *Sustainably developing rural, urban and coastal areas* in the Strategic Plan 2025-2027.

3. Innovative funding and new business models for the transformation of neighbourhoods

The built environment faces diverse challenges that hinder its transition towards greater sustainability, circularity, and social inclusion. For the sector to overcome established norms, practices, and conservative mindsets and adapt towards greater circularity and sustainability, the demand and appropriate incentives must be ensured. New business and funding models provide a framework to rethink how public and private projects are conceived, planned and executed for greater circularity and sustainability.

This Destination aims to better understand the market with its demand and supply sides as well as the related policy and regulatory aspects. Actions under this destination will develop new business and social economy models and innovative funding schemes (on different governance levels) to attract more capital and drive positive change in neighbourhoods. The uptake of new values, including social and aesthetic values, will be encouraged.

This Destination delivers on the expected impacts 8 *Realising the full potential of cultural heritage, arts, and cultural and creative sectors*, 9 *Strengthening social and economic resilience and sustainability*, and 15 *Achieving global leadership in climate-neutral, circular and digitised industrial and digital value chains* in the Strategic Plan 2025-2027.

Under the R&I component of the NEB Facility, applicants are encouraged to explore complementarities with topics and activities in Horizon Europe partnerships (in particular: Built4People, Circular Bio-based Europe and Driving Urban Transition, Forests and Forestry for a Sustainable Future, Innovative Materials for the EU, Processes4Planet, Resilient Cultural Heritage, Social Transformations and Resilience, and Textile of the Future), Missions (in particular the Climate-Neutral and Smart Cities Mission and the Adaptation to Climate Change Mission) and Clusters (in particular Cluster 2 on Culture, Creativity, and Inclusive Society, Cluster 3 on Civil Security for Society, Cluster 5 on Climate, Energy and Mobility, and Cluster 6 on Food, Bioeconomy, Natural Resources, Agriculture & Environment). Opportunities for collaboration and synergies should also be explored and, as appropriate, pursued with other relevant initiatives such as the innovation ecosystems or the Knowledge and Innovation Communities (KICs) of the European Institute of Innovation and Technology (EIT). Additionally, Horizon Europe grantees are invited to consider possible collaborations and cross-fertilisation between their project and other projects selected under the same or other relevant calls.

NEB Facility: roll-out component

The deployment of innovative solutions will be supported by the roll-out component of the NEB Facility through various sources of funding, including EU funds (except Horizon Europe), but also national or private ones. Applicants are encouraged to identify areas of convergence between the NEB Facility and national priorities, as well as possible funding opportunities at national, regional or local levels or from private sources, including philanthropic. Applicants are also encouraged to develop new collaborations or to build on and expand existing collaborations under the roll-out component with other EU programmes, like the Cohesion policy funds, European Regional Development Fund (ERDF), European Social Fund (ESF+), the Just Transition Fund (JTF), Single Market Programme, Digital Europe Programme, Creative Europe, Erasmus+, European Solidarity Corps, Structural Reform Support Programme (SRSP), the Programme for the Environment and Climate Action (LIFE), the European Maritime, Fisheries and Aquaculture Fund (EMFAF). Applicants could enhance the reach and impact of their projects for instance through broader stakeholder cooperation and follow-on activities.

Glossary

Beautiful is one of the three core values of the NEB. Beautiful means aesthetically pleasing, emphasising the quality of experience, beyond mere functionality. Projects are in line with this value if they are genuinely attentive to their context, which includes arts and culture, quality, diversity and heritage. They contribute to people's physical and mental health and well-being, foster a sense of belonging and quality of individual and collective experience. These projects promote a high-quality living environment and activate the cultural, social and natural qualities of a place.

Bio-based products are wholly or partly derived from materials of biological origin (such as plants and trees, animals, enzymes, and microorganisms, including bacteria, fungi and yeast).¹³ For example, bio-based plastics, as defined by the European Union, are made from biomass. This biomass originates mainly from plants grown specifically to be used as feedstock to substitute fossil resources. Other sources are organic waste and by-products, such as used cooking oil, bagasse and tall oil.¹⁴

Bio-fabricated materials are made by growing living cells and microorganisms such as bacteria, yeast, and mycelium. There are two categories of bio-fabricated materials: the first are materials made with ingredients that are bio-fabricated. The ingredients are bio-fabricated but need further mechanical or chemical processing to make a macroscale material structure. The second are bio-assembled materials which are macroscale structures directly grown from living microorganisms, such as an acoustic panel that is entirely made of mycelium.¹⁵ Bio-fabricated materials have more specific requirements towards their production processes than bio-based products (see the respective entry in this glossary).

Built environment refers to human-made buildings and infrastructures that provide physical settings for human activities. This includes, but is not limited to, public and private buildings, streets, transport and energy infrastructure, common spaces, public places, and green open spaces¹⁶. The built environment plays an essential role in addressing the basic needs of society, such as having places to live, work, learn, consume, travel and entertain. The built environment can contribute to a more just society by accommodating the needs of different

¹³ https://single-market-economy.ec.europa.eu/sectors/biotechnology/bio-based-products_en

¹⁴ European Commission: Directorate-General for Environment (2022, November 30). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. EU policy framework on biobased, biodegradable and compostable plastics.* COM/2022/682 final. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52022DC0682>

¹⁵ <https://healthymaterialslab.org/blog/bio-definitions>

¹⁶ Thompson, S. M., & Kent, J. L. (2017). Human Health and a Sustainable Built Environment. *Encyclopedia of Sustainable Technologies*, 2, 71-80. <http://dx.doi.org/10.1016/B978-0-12-409548-9.10178-2>

individuals and groups.¹⁷ It influences the physical health of inhabitants¹⁸ (e.g. by encouraging physical exercise) as well as their mental health (e.g. by helping reduce stress).

Circular economy is a business concept aiming to create a closed-loop system and maintain the value of products, materials, and resources for as long as possible by returning them into the product cycle at the end of their use, while minimising the generation of waste. In this economic system, ‘waste’ can become a feedstock source for another process or value chain.¹⁹ Resource value retention options (R-strategies) form one of the circular economy fundamental principles. The 10 R strategies can be classified with three clusters: 1. R-strategies closely related to consumer/customer alternatives (refuse, reduce, resell/reuse, repair); 2. R-strategies referring to various forms of upgrading used products on the side of users but dominantly carried out by business actors (refurbish, remanufacture, repurpose); 3. R-strategies referring to aggregate material flows, often resulting in downcycling (recycle, recover, re-mine).²⁰

Common spaces are spaces that are brought into being through common practices.²¹ These common practices are linked to a physical public, semi-public or private place that is accessible by all.²² This physical public place is demarcated by the built environment, which can facilitate or hinder social activities.

Community is a social unit. Interactions that occur in the built environment can foster a sense of community and belonging in many ways.²³ Interaction enables people to build communities, commit themselves to each other, and knit the social fabric (see the respective entry in this glossary). The perception of being part of a collective²⁴ and locally-based social relationship beyond the household and family²⁵ are essential to define a coherent social group

¹⁷ Seyedrezaei, M., Becerik-Gerber, B., Awada, M., Contreras, S., & Boeing, G. (2023). Equity in the built environment: A systematic review. *Building and Environment*, 245, 1-19. <https://doi.org/10.1016/j.buildenv.2023.110827>

¹⁸ Roof, K., & Oleru, N. (2008). Public Health: Seattle and King County’s Push for the Built Environment. *Journal of Environmental Health*, 71(1), 24–27. <http://www.jstor.org/stable/26327656>

¹⁹ Reike, D., Vermeulen, W.J.V., Witjes, S. (2022). *Conceptualization of Circular Economy 3.0: Synthesizing the 10R Hierarchy of Value Retention Options*. In: Alvarez-Risco, A., Rosen, M.A., Del-Aguila-Arcentales, S. (eds) *Towards a Circular Economy. CSR, Sustainability, Ethics & Governance*. Springer, Cham. https://doi.org/10.1007/978-3-030-94293-9_3

²¹ Cianciotto, L. M. (2020). Public Space, Common Space, and the Spaces In–Between: A Case Study of Philadelphia’s LOVE Park. *City & Community*, 19(3), 676-703. <https://doi.org/10.1111/cico.12454>

²² Zhang, X., & He, Y. (2020). What Makes Public Space Public? The Chaos of Public Space Definitions and a New Epistemological Approach. *Administration & Society*, 52(5), 749-770. <https://doi.org/10.1177/0095399719852897>

²³ Thompson, S. M., & Kent, J. L. (2017). Human Health and a Sustainable Built Environment. *Encyclopedia of Sustainable Technologies*, 2, 71-80. <http://dx.doi.org/10.1016/B978-0-12-409548-9.10178-2>

²⁴ Zanbar, L. (2020). Sense of Belonging and Commitment as Mediators of the Effect of Community Features on Active Involvement in the Community. *City & Community*, 19(3), 617-637. <https://doi.org/10.1111/cico.12420>

²⁵ Horak, M., & Vanhooren, S. (2024). Somebody to Lean On: Community Ties, Social Exchange, and Practical Help during the COVID-19 Pandemic. *City & Community*, 23(1), 3-25. <https://doi.org/10.1177/15356841231159370>

as a community. The coherence of a social unit, that is a community, includes the capacity to act, a shared social reality, and a relatively stable culture and identity.²⁶

Construction ecosystem covers contractors for building and infrastructure projects, construction product manufacturers, engineering and architectural services, urban planners, construction workers, engineers as well as other relevant actors and economic activities (e.g., rental and leasing of machinery and equipment, employment agencies)²⁷ involved in the design, construction, maintenance, refurbishment, and demolition of buildings and infrastructure.²⁸²⁹

Green gentrification is defined as new or intensified urban socio-spatial inequities produced by urban greening agendas and interventions, such as greenways, parks, community gardens, ecological corridors, or green infrastructure.³⁰ While urban greening has diverse climate, health, and socio-economic benefits, it can under certain circumstances also contribute to green gentrification processes and thus to new social, racial, and health inequalities that eventually undermine climate equity and justice.³¹

Green transition is a concept of moving from a carbon-based economy to a more sustainable economy while transforming environmental challenges and climate related difficulties into prosperous opportunities that benefit everyone in society. The green transition fosters welfare and well-being through a new sustainable economic model, while ensuring socioeconomic systems remain within ecological planetary boundaries.

Inclusive is a core value of the NEB that revolves around the essential idea of granting and securing equal access to opportunities and resources for all and encouraging exchanges across cultures, genders and ages. The basic ambition addresses the physical, social and economic inclusion of all members of the society which also includes affordability for all and accessibility. The second level targets the broader concept of social justice, to be achieved not only by specific, temporary solutions at project level but through institutional setups, governance and business models, and structural safeguards. The third and highest level of ambition refers to fundamentally equitable societal models based on solidarity and cooperation. A part of these ideas and ambitions is directly linked to the physical characteristics of the built environment.

²⁶ Whitham, M. M. (2019). Community Entitativity and Civic Engagement. *City & Community*, 18(3), 896-914. <https://doi.org/10.1111/cico.12385>

²⁷ European Commission Annual Single Market Report (2021) (https://commission.europa.eu/system/files/2021-05/swd-annual-single-market-report-2021_en.pdf)

²⁸ Adner, R. (2017). Ecosystem as Structure: An Actionable Construct for Strategy. *Journal of Management*, 43(1), 39-58. <https://doi.org/10.1177/0149206316678451>

²⁹ Vigren, O. (2023). Ecosystems in construction management and urban development: a comprehensive review of conceptualizations and contributions. *Construction Management and Economics*, 42(2), 162–181. <https://doi.org/10.1080/01446193.2023.2247496>

³⁰ Anguelovski, I., Connolly, J. J., Garcia-Lamarca, M., Cole, H., & Pearsall, H. (2019). New scholarly pathways on green gentrification: What does the urban ‘green turn’ mean and where is it going? *Progress in Human Geography*, 43(6), 1064-1086. <https://doi.org/10.1177/0309132518803799>

³¹ Anguelovski, I., Connolly, J.J.T., Cole, H. *et al.* Green gentrification in European and North American cities. *Nat Commun* **13**, 3816 (2022).

Indigenous knowledge focuses on the plurality of ways of knowing the environment and explores the importance of understanding how knowledge production is tied to place and culture.³² Indigenous knowledge is locally developed over centuries and has been transmitted orally from generation to generation. Indigenous knowledge systems are fundamentally important to indigenous identity, culture, languages, heritage, and livelihoods.³³ Some issues of indigenous knowledge, such as a more-than-human approach, continue to intersect with questions about the authority of science and its representations of nature, about the politics of science and technology as interpreted by institutions and policymakers at all levels, and about the role of technology and development in the forging of a more equitable world.³⁴

Multi-level engagement refers to the implementation of an effective exchange between peers and others who operate on a different scale or level of governance, bridging the local, regional, federal, European and global dimension.

Nature-based solutions are inspired and supported by nature. They are cost-effective, simultaneously provide environmental, social and economic benefits and help improving building's resilience and climate adaptability. Implementing nature-based solutions such as green infrastructure, water-efficient landscaping, and erosion control will enhance soil, thus ecosystem stability, which will bring more and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions.³⁵

NEB thematic axes³⁶ link the initiative to the people and their interests, needs and motivations in order to foster dialogue, collaboration, creativity, bringing together different disciplines and different stakeholders. The first axis is about reconnecting with nature and going beyond a human-centred to a life-centred perspective. This reflects widespread awareness and willingness to address climate change (mitigation and adaptation) and to reduce exposure to pollution. In this context, education and culture play a key role in the shift of paradigm towards new behaviours and values. The second axis is about regaining a sense of belonging and magnifying and linking collective and private experiences and building bridges between people. This path ranges from intergenerational solidarity over cultural heritage to proximity economy. The third axis is about prioritising the places and people that need it the most and ensuring that beauty and sustainability are affordable and accessible to all. Exclusion, segregation, or poverty are real threats in many built environments, which the NEB must encounter and help to overcome. The fourth axis is about the need for long-term, lifecycle thinking in the industrial ecosystem and tackling unsustainable use of resources, including obsolete buildings or infrastructures, and waste. NEB projects promote a thorough

³² Doolittle, A. A. (2010). The Politics of Indigeneity: Indigenous Strategies for Inclusion in Climate Change Negotiations. *Conservation and Society*, 8(4), 286–291. <http://www.jstor.org/stable/26393018>

³³ Malapane, O. L., Chanza, N., & Musakwa, W. (2024). Transmission of indigenous knowledge systems under changing landscapes within the vhavenda community, South Africa. *Environmental Science & Policy*, 161, 1-9. <https://doi.org/10.1016/j.envsci.2024.103861>

³⁴ Philip, K. S. (2015). Indigenous Knowledge: Science and Technology Studies. In J. D. Wright (ed.), *International Encyclopedia of the Social & Behavioral Sciences* (2nd ed., pp. 779-783). Elsevier. <https://doi.org/10.1016/B978-0-08-097086-8.85012-6>

³⁵ https://research-and-innovation.ec.europa.eu/research-area/environment/nature-based-solutions_en

³⁶ For more detailed information, see the [NEB Compass](#) and the [NEB Investment Guidelines](#).

circular economy mindset and address these challenges in terms of design, materials, technologies, processes and behaviours.

NEB core values: The commitment and the support of innovative solutions are rooted in the three intertwined NEB values **sustainable, inclusive** and **beautiful**³⁷. See their respective entries in this glossary.

NEB working principles are an addition to the three NEB core values. They describe the process through which a project should operate and work to achieve the highest level of ambition in the three core values. A NEB project should embrace three working principles: **participatory process, multi-level engagement** and **transdisciplinary approach**³⁸. See their respective entries in this glossary.

Neighbourhoods are understood as comprehensive residential systems in rural, peri-urban or urban areas with mixed functions. A neighbourhood ideally includes public and private functions and infrastructures such as education institutions (e.g. kindergartens, primary schools), cultural facilities, community centres, youth centres, retirement homes, post offices, banks, stores, parks, and workplaces. Neighbourhoods are where people live, socialise and find services to meet a substantial part of their daily needs. In contrast to communities, which are social units, neighbourhood refers to a physical unit where one can address local-level challenges through planning initiatives. For the purpose of the NEB Facility implementation, a neighbourhood will be understood as an area that either has a maximum of 25 km² or a maximum of 10,000 inhabitants. A neighbourhood should also be part of or represent the lowest level of a public administration or elected body such as a quarter, borough or district.

Participatory process consists of concrete steps and activities that are an integral part of a project's preparation and operation. Participatory processes ensure that stakeholders have a voice in projects that affect them in addressing transformational change. Participatory processes require a careful implementation in order to ensure that they are genuinely inclusive and impactful. Successful participatory processes strengthen social cohesion and foster a sense of co-ownership and co-responsibility.

Regenerative design aims to actively restore, revitalise and enhance ecosystems and create sustainable, thriving environments for local communities and nature.³⁹ It is based on a holistic worldview that sees humans and economies as an integral part of nature. It is about sustaining qualitative growth for the well-being of all life on Earth in cooperation with nature. Applied to the built environment and following regenerative design criteria,⁴⁰ regenerative design

³⁷ For more detailed information, see the [NEB Compass](#) and the [NEB Investment Guidelines](#).

³⁸ For more detailed information, see the [NEB Compass](#) and the [NEB Investment Guidelines](#).

³⁹ Tainter, J. A. (2012). Regenerative design in science and society. *Building Research & Information*, 40(3), 369–372. <https://doi.org/10.1080/09613218.2012.671998>

⁴⁰ European Commission: Directorate-General for Research and Innovation, Schellnhuber, H., Widera, B., Kutnar, A., Organschi, A., Hafner, A., Hillebrandt, A., Murphy, O., & Nakicenovic, N. (2022). *Horizon Europe and new European Bauhaus NEXUS report : conclusions of the High-Level Workshop on 'Research and Innovation for the New European Bauhaus'*, jointly organised by DG Research and

offers pathways to develop construction and renovation methods and designs that go beyond conventional approaches. Regenerative designs will contribute to long-term ecosystem resilience and improved soil quality in urban and rural NEB neighbourhoods, creating a more harmonious coexistence between the built environment and nature, while saving and sustainably producing resources and making the built environment more resilient, sustainable, inclusive and beautiful.⁴¹

Social fabric is knitted through interactions between people and within communities (see the entry for *Community*). It is crucial for a sense of belonging. The interplay between economic and social factors drives the improvement or deterioration of the social fabric of a place. Therefore, social fabric requires actions to take place at local or community level, rather than regional or national level.⁴²

Social infrastructure refers to the institutional and spatial frameworks that support collective civic life, including community facilities and public spaces that foster social interaction, community development, and social cohesion.

Social sciences and humanities (SSH) conduct broader research on societies and the members and their interactions within societies. The sustainable societal impacts sought by policy makers often depend on the contributions of SSH researchers working in multi- and/or interdisciplinary scientific collaborations. SSH encompasses a broad range of disciplines such as sociology, economics, political sciences, anthropology, ethnology, philosophy, linguistics, psychology, communication sciences, law, the arts, history and more.⁴³ Within the scientific field, SSH will play an important role in the R&I component of the NEB Facility to emphasise the holistic nature of the initiative.

Street furniture refers to functional and beautiful objects and installations placed in common spaces (see the respective entry in this glossary), to support various activities and improve the quality of the public environment. Examples include benches, bus shelters, sun or rain shelters, trash bins, plant trough or signage but also small-scale energy infrastructure. Overall, elements of street furniture enhance functionality, comfort, inclusiveness and aesthetics in outdoor spaces.⁴⁴

Sufficiency is a set of policy measures and daily practices which avoid the demand for energy, materials, land, water, and other natural resources, while delivering wellbeing for all

Innovation and the Joint Research Centre, Publications Office of the European Union.
<https://data.europa.eu/doi/10.2777/49925>

⁴¹ Arup (2020, February 6). Arup Explores Regenerative design [Report]. Arup.

⁴² Tanner, W., O'Shaughnessy, J., Krasniqi, F., & Blagden, J. (2020). *The State of our Social Fabric: Measuring the changing nature of community over time and geography* [online]. London: Onward. Available at: <https://www.ukonward.com/wp-content/uploads/2020/09/The-State-of-our-Social-Fabric.pdf>

⁴³ European Commission: Directorate-General for Research and Innovation. (2023). *Integration of social sciences and humanities in Horizon 2020 : participants, budgets and disciplines 2014 - 2020 : final monitoring report*. Publications Office of the European Union.
<https://data.europa.eu/doi/10.2777/075642>

⁴⁴ Gehl, J. (2010). *Cities for People*. Island Press.; Lynch, K. (1975). *The Image of the City*. MIT Press.

within planetary boundaries.⁴⁵ Sufficiency measures applied to the built environment are designed to optimise the use of existing buildings, limiting their under-occupation rates and leading to the reduction of demand for new built floor space and, thereby, to the reduction of resource and land consumption and environmental impact by the built environment.⁴⁶ Applied to neighbourhoods, sufficiency measures should also be understood in terms of a high mix of functions, aiming to reduce the need for car trips or long-distance travel. This means ensuring that children can attend schools within or close to their neighbourhood, providing a certain number of jobs, and incorporating functions that meet the daily needs of residents (e.g. 15min-city approach).

Sustainable is a core value of the NEB. In alignment with the European GreenComp framework, sustainability is about prioritising the needs of all life forms and of the planet by ensuring that human activity does not exceed planetary boundaries⁴⁷ which define a safe operating space for humanity based on the intrinsic biophysical processes that regulate the stability of the Earth system.⁴⁸ Particularly, construction methods and materials that are resource-efficient and avoid damaging local soils, while using bio-fabricated materials or recycled components, minimizing waste and reducing the need for extracting raw resources, should be encouraged. The basic sustainability ambition is concerned with conventional features like the ability to preserve or prolong usability, and the next level considers the entire system of a project. The highest ambition is to regenerate and reconnect to nature (see additionally the entry for *regenerative design*).

Transdisciplinary approaches aim for higher integration of formal and informal knowledge and go beyond technical disciplines while addressing in particular social, artistic and design expertise. They should ground scientific expertise in society by drawing on the knowledge of non-academics, the public and public administrations. This contributes to the construction of knowledge and solution of social problems that go beyond disciplinary boundaries and provide a systemic, global and integrated perspective.⁴⁹ Within the scientific field, the social sciences and humanities (SSH) will play an important role in the R&I component of the NEB Facility to emphasise the holistic nature of the initiative.

⁴⁵ https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_FullReport.pdf (p. 31)

⁴⁶ See also:

⁴⁷ Bianchi, G., Pisiotis, U., & Cabrera Giraldez, M. (2022). *GreenComp. The European sustainability competence framework* (Y. Punie and M. Bacigalupo, Eds.). Publications Office of the European Union. <https://doi.org/10.2760/13286>

⁴⁸ Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., Bigggs, R., Carpenter, S. R., de Vries, W., de Wit, C. A., Folke, C., Gerten, D., Heinke, J., Mace, G. M., Persson, L. M., Ramanathan, V., Reyers, B., & Sörlin, S. (2015). Planetary Boundaries: Guiding human development on a changing planet. *Science*, 347(6223). <https://doi.org/10.1126/science.1259855>

⁴⁹ Darbellay, F. (2015). Rethinking inter- and transdisciplinarity: Undisciplined knowledge and the emergence of a new thought style. *Futures*, 65, 163-174. <http://dx.doi.org/10.1016/j.futures.2014.10.009>

Calls

Call - A research agenda for a beautiful, inclusive and sustainable transformation of neighbourhoods

HORIZON-NEB-2025-01

Overview of this call⁵⁰

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁵¹	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025 Deadline(s): 12 Nov 2025				
Destination - Connecting the green transformation, social inclusion and local democracy				
HORIZON-NEB-2025-01-PARTICIPATION-01: The impact of common space on neighbourhood communities	RIA	10.50	Around 3.50	3
HORIZON-NEB-2025-01-PARTICIPATION-02: Fostering and maintaining the social fabric for the green transition in neighbourhoods	RIA	9.00	Around 3.00	3
HORIZON-NEB-2025-01-PARTICIPATION-03: Beautiful, sustainable and inclusive street furniture for the transformation of neighbourhoods	IA	10.40	Around 5.20	2
HORIZON-NEB-2025-01-PARTICIPATION-04: Network of neighbourhoods for innovative	CSA	2.50	Around 2.50	1

⁵⁰ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

⁵¹ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

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policies on gentrification				
Destination - Circular and regenerative approaches for the built environment				
HORIZON-NEB-2025-01-REGEN-01: Applying regenerative design to the built environment in neighbourhoods	IA	16.00	Around 8.00	2
HORIZON-NEB-2025-01-REGEN-02: Bio-fabricated materials for sustainable and beautiful construction	RIA	10.00	Around 5.00	2
HORIZON-NEB-2025-01-REGEN-03: Sufficiency measures in the built environment	RIA	8.00	Around 4.00	2
HORIZON-NEB-2025-01-REGEN-04: Innovative approaches for sustainable, inclusive and beautiful social and affordable housing	IA	16.00	Around 8.00	2
Destination - Innovative funding and new business models for the transformation of neighbourhoods				
HORIZON-NEB-2025-01-BUSINESS-01: Renovating the built environment through design for adaptability and disassembly.	IA	12.00	Around 6.00	2
HORIZON-NEB-2025-01-BUSINESS-02: Bottom-up social entrepreneurship for the co-creation of neighbourhoods in line with the New European Bauhaus	IA	12.00	Around 4.00	3
HORIZON-NEB-2025-01-BUSINESS-03: Reverse local construction supply chains for the beautiful re-assembly of reclaimed construction products	RIA	12.00	Around 4.00	3
Overall indicative budget		118.40		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and</i>	The criteria are described in General Annex

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<i>exclusion</i>	C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Destinations

Destination - Connecting the green transformation, social inclusion and local democracy

To make the green transition happen, social fairness needs to be at its heart. Inhabitants have to have the opportunity to influence the green transition and feel ownership of the measures to reach climate neutrality and circularity⁵², zero pollution and restore biodiversity. It is also important to better anticipate and manage climate-related risks across society, and to interact with inhabitants to build new concepts. All of this requires a closer understanding of people and how they experience their everyday lives. A recent Eurobarometer demonstrates that 88% of EU citizens think that the green transition should be fair and leave no one behind. Yet only 46% of Europeans are confident that by 2050 sustainable⁵³ energy, products and services will be affordable for everyone, including poorer people⁵⁴.

Vulnerable and marginalised groups are often more exposed to climate risks and pollution and affected by adverse impacts (e.g. health, energy poverty), while being least responsible and having lower capacity to adapt. The inclusion⁵⁵ of different types of ownership (e.g. private, social, retirement, student housing, etc.) as well as various building typologies (e.g. high-rise buildings, slab blocks, villa blocks, terraced houses, etc.) in the planning of new neighbourhoods⁵⁶ or the transformation of existing ones can also facilitate a quicker integration of marginalized and vulnerable groups - particularly younger generations, which should have equal opportunities and conditions for education regardless of their background - and fosters higher social intelligence among privileged groups.

In Work Programme 2025, this Destination contributes to the following expected impacts set out on the Horizon Europe Strategic Plan 2025-2027:

- 8. Realising the full potential of cultural heritage, arts, and cultural and creative sectors
- 10. Boosting inclusive growth and reducing vulnerabilities effectively
- 31. Sustainably developing rural, urban and coastal areas.
- 32. Developing innovative governance models and tools enabling sustainability and resilience.

This Destination seeks to reinforce ownership and a sense of belonging through more active, engaged and inclusive communities⁵⁷ in neighbourhoods for the sustainable, inclusive, and

⁵² See definition in the Glossary section of the NEB part of the HE WP25.

⁵³ See definition in the Glossary section of the NEB part of the HE WP25.

⁵⁴ [Fairness perceptions of the green transition - October 2022 - - Eurobarometer survey \(europa.eu\)](https://ec.europa.eu/eurobarometer/surveys/trend/1000000000-fairness-perceptions-of-the-green-transition-october-2022)

⁵⁵ See definition in the Glossary section of the NEB part of the HE WP25.

⁵⁶ See definition in the Glossary section of the NEB part of the HE WP25.

⁵⁷ See definition in the Glossary section of the NEB part of the HE WP25.

beautiful⁵⁸ transformation of neighbourhoods along the values⁵⁹ and principles⁶⁰ of the New European Bauhaus. This Destination will pay particular attention to the inclusion of different sociodemographic groups – such as families, women, children, youth, and older adults as well as vulnerable groups, including LGBTIQ+, people with physical and psychological functional variations, homeless, migrants and refugees, minorities, etc. – in design, creation and decision-making processes that affect them and the built environment⁶¹ they live in.

Cultural participation, cultural heritage, cultural and linguistic diversity, and the inclusion of indigenous⁶² and marginalised forms of knowledge can help enable this by offering a broader menu of interpretations and therefore different ways of making sense and assigning meaning to surroundings. The Destination will also foster social and ecological co-benefits to enable environmentally friendly, healthy and inclusive behaviours, and beautiful and environmentally friendly, healthy, inclusive environments.

More specifically, this Destination aims to:

- Understand how individual and collective mind-sets, habits and behaviours can change into more sustainable and inclusive ones in urban, peri-urban, and rural areas and how to promote interconnections between these diverse realities, turning the limitations and constraints stemming from the green and digital transitions into economic, cultural and social opportunities.
- Further explore the transformative potential of participatory practices and governance models (at local, national and regional levels), notably how culture, the arts and creative industry as well as the socio-cultural work sector can enhance transformation processes for the green transition, help address vulnerability and social equity concerns, and contribute to social inclusion, democracy, and sense of belonging in communities.

Proposals are invited against the following topic(s):

HORIZON-NEB-2025-01-PARTICIPATION-01: The impact of common space on neighbourhood communities

Call: A research agenda for a beautiful, inclusive and sustainable transformation of neighbourhoods	
Specific conditions	
<i>Expected EU contribution per</i>	The Commission estimates that an EU contribution of around EUR 3.50 million would allow these outcomes to be addressed appropriately.

⁵⁸ See definition in the Glossary section of the NEB part of the HE WP25.

⁵⁹ See the definitions of 'beautiful', 'inclusive' and 'sustainable' in the Glossary section of the NEB part of the HE WP25.

⁶⁰ See the definitions of 'multi-level engagement', 'participatory process' and 'transdisciplinary approaches' in the Glossary section of the NEB part of the HE WP25.

⁶¹ See definition in the Glossary section of the NEB part of the HE WP25.

⁶² See definition in the Glossary section of the NEB part of the HE WP25.

<i>project</i>	Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.50 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ⁶³ .

Expected Outcome:

Project results are expected to contribute to all of the following expected outcomes:

- Better understanding of the effects of the design, aesthetics and other features of common spaces⁶⁴ on inhabitants' behaviour (including e.g. their social interactions and recognition, civic participation, use of spaces and buildings), health, sense of belonging, diversity and inclusion, security, resilience, and opportunities to produce social, cultural and local economic value.
- Enhanced capacities of relevant stakeholders to integrate insights in policies, strategies, plans and measures for the regeneration of common spaces in neighbourhoods⁶⁵.

Scope:

One of the core NEB values⁶⁶ is inclusion⁶⁷. The regeneration of common spaces can facilitate inclusiveness and social interaction in neighbourhoods by providing a safe, accessible, and attractive environment. Attractive, well-designed, well-maintained, and secure common spaces can bring people together for commercial, cultural, and leisure activities. A safe environment can also create a sense of trust and community⁶⁸ among inhabitants. Recognising a neighbourhood's diversity “not only improves social and spatial cohesion but also

⁶³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

⁶⁴ See definition in the Glossary section of the NEB part of the HE WP25.

⁶⁵ See definition in the Glossary section of the NEB part of the HE WP25.

⁶⁶ See definition in the Glossary section of the NEB part of the HE WP25.

⁶⁷ See definition in the Glossary section of the NEB part of the HE WP25.

⁶⁸ See definition in the Glossary section of the NEB part of the HE WP25.

contributes to democratic, peaceful coexistence⁶⁹”. Social, economic, and cultural services and amenities that reflect this diversity and allow for people to come together and interact, can have a particular impact on inclusion and can lead to new forms of collaboration, solidarity and social recognition.

Better knowledge of how common spaces affect social relations is required to scale up successful common space initiatives across Europe. This topic seeks to produce insights on the impacts of common spaces (new, redesigned or redeveloped) on neighbourhoods and their communities.

Proposals are expected to address all of the following:

- Study a range of common space projects in at least three EU Member States or Associated Countries, collecting data and drawing on evidence, to better understand:
 - o The medium and long-term impacts of common spaces on community cohesion, social interactions, active civic participation, resilience, diversity, as well as sense of security and belonging. This includes identifying if and to what extent these impacts vary in neighbourhoods with different characteristics, for example, in terms of social infrastructure, economy, housing ownership patterns, services, etc.
 - o How the design and maintenance of common spaces (including the process, for example relying on participatory approaches), the degradation of the bordering built environment, and the preservation of cultural heritage, influences the above identified effects of common space.
 - o How the integration of the three core NEB values in the design of common spaces impacts the above identified effects of common space.
 - o How the different groups of people (such as women, children, youth, older adults, people with disabilities, underrepresented, vulnerable and marginalised groups, LGBTIQ+) make use of and experience common spaces.
 - o How variations in the use of common spaces in different periods of the year influence community cohesion, social interactions, and civic participation.
- Based on the research evidence, provide recommendations for public administrations and other stakeholders involved in the regeneration of common spaces in neighbourhoods.

Proposals are expected to follow a participatory and transdisciplinary approach⁷⁰ through the integration of different actors (such as public authorities, local actors from the targeted neighbourhoods, civil society, private owners, cultural institutions, etc.) and disciplines (such as architecture or design, arts, (civil) engineering).

⁶⁹ Report of the EU Member State Expert Group 2021 Towards a shared culture of architecture investing in a high-quality living environment for everyone.

⁷⁰ See definition on NEB working principles in the Glossary section of the NEB part of the HE WP25

This topic requires the effective contribution of social sciences and humanities⁷¹ (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals are expected to dedicate at least 0.2% of their total budget to share their intermediate and final results and findings with the Coordination and Support Action 'New European Bauhaus hub for results and impact' (HORIZON-MISS-2024-NEB-01-03).

HORIZON-NEB-2025-01-PARTICIPATION-02: Fostering and maintaining the social fabric for the green transition in neighbourhoods

Call: A research agenda for a beautiful, inclusive and sustainable transformation of neighbourhoods	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 9.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025)⁷².</p>

Expected Outcome:

Project results are expected to contribute to all of the following expected outcomes:

- Better evidence is made available to public authorities and not-for-profit organisations of the conditions under which cultural participation may reinforce the social fabric and

⁷¹ See definition in the Glossary section of the NEB part of the HE WP25

⁷² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

civic engagement in neighbourhoods and contribute to the green transition in neighbourhoods⁷³.

- Improved understanding of the role of cultural and creative sectors in contributing to participatory decision-making processes, community engagement strategies and activities for the green transition in neighbourhoods.
- Improved methods and strategies to increase neighbourhood inhabitants' sense of belonging as well as their collective engagement and ownership (and that of other stakeholders) in the green transition of neighbourhoods.

Scope:

Social connections and cultural participation are core features of individual well-being. Evidence shows a strong association between participation in cultural activities and civic behaviour (such as voting and volunteering), empathy, tolerance, security and social cohesion⁷⁴. Conversely, low interpersonal trust, heightened risk-taking, and disengaged civic attitudes are correlated with an increased sense of loneliness⁷⁵ – the lack of meaningful social interactions. Cultural organisations and artistic practices with a social purpose or dimension can help to better connect people, strengthen social fabric⁷⁶, and overcome social boundaries.

This topic aims to study the interplay between cultural participation, social connections and civic engagement. The resulting insights can be used to foster and maintain the social fabric of neighbourhoods and support their green transition while addressing other challenges such as the decline in social connections⁷⁷.

Proposals are expected to address all of the following:

- Study the conditions under which cultural participation may reinforce the social fabric and civic engagement in neighbourhoods and contribute to the green transition:
 - o Review existing evidence and collect relevant data in a systematic, comparable way (at least in relation to some territories or dimensions) and identifying trends, gaps and correlations.
 - o Explore the wider benefits of cultural participation for individuals and communities (including those feeling left behind, all risk groups vulnerable and/or marginalised, etc.). Where possible, establish correlations, causal links, detailed descriptions, etc., depending on the proposed methodology.

⁷³ See definition in the Glossary section of the NEB part of the HE WP25.

⁷⁴ [New report: participation in cultural activities strengthens democracy and social cohesion | Culture and Creativity \(europa.eu\)](#)

⁷⁵ https://publications.jrc.ec.europa.eu/repository/bitstream/JRC136823/JRC136823_01.pdf

⁷⁶ See definition in the Glossary section of the NEB part of the HE WP25.

⁷⁷ Robert D. Putnam described in his book *Bowling Alone: The Collapse and Revival of American Community* (2000) the decline in face-to-face social interactions in America, arguing that this weakens active civic engagement, which is strongly connected to democracy.

- Provide a comprehensive analysis of relevant variables, such as socio-demographic characteristics, context-specific aspects, the presence (or absence) of meeting spaces / social infrastructure, digital literacy, local innovation capacity, polarisation, wellbeing and mental health, safety and crime, loneliness, etc.
- Propose at least three methods or strategies to foster and maintain the social fabric of neighbourhoods and support their green transition. These strategies, approaches or methodologies have to be guided by evidence. They are demonstrated and monitored in at least three neighbourhoods in different Member States or Associated Countries to analyse their effectiveness and their potential for sustained effects in time, in particular as regards community and civic engagement (in particular of the most marginalised and underrepresented).
- Based on the research evidence, propose recommendations for public authorities and not-for-profit organisations on how to facilitate cultural participation, including the skills, competencies and partnerships needed for their implementation.

Proposals are expected to follow a participatory and transdisciplinary approach⁷⁸ through the integration of different actors (such as public authorities, local actors from the targeted neighbourhoods, civil society, private owners, cultural operators, etc.) and disciplines.

This topic requires the effective contribution of social sciences and humanities⁷⁹ (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals are expected to dedicate at least 0.2% of their total budget to share their intermediate and final results and findings with the Coordination and Support Action 'New European Bauhaus hub for results and impact' (HORIZON-MISS-2024-NEB-01-03).

HORIZON-NEB-2025-01-PARTICIPATION-03: Beautiful, sustainable and inclusive street furniture for the transformation of neighbourhoods

Call: A research agenda for a beautiful, inclusive and sustainable transformation of neighbourhoods	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.20 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.40 million.

⁷⁸ See definition on NEB working principles in the Glossary section of the NEB part of the HE WP25
⁷⁹ See definition in the Glossary section of the NEB part of the HE WP25.

<i>Type of Action</i>	Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Beneficiaries may provide financial support to third parties and can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 100 000 to allow for the prototyping and demonstration of the innovative designs.</p>

Expected Outcome:

Project results are expected to contribute to all of the following expected outcomes:

- Improved integration of public authorities (for compliance with regulations, strategies, etc.), social actors as well as the arts, especially cultural and creative sectors and industries (including local crafters and manufacturers), into the design and development of innovative street furniture⁸⁰.
- Better evidence on the uses of street furniture and the role of the co-creation in the design of street furniture informs procurement processes to improve quality of experience, safety, security⁸¹, sustainability⁸², resilience to the impact of climate change⁸³ and inclusiveness in neighbourhoods through street furniture.

Scope:

Infrastructural decay, unequal access to essential public amenities (e.g., seating elements, facilities for people with disabilities such as ramps and lifts, etc.) and safety concerns (e.g., related to insufficient lighting or hazardous spatial conditions) represent just some of the challenges that especially older and poorer European neighbourhoods face.

The design of street furniture in neighbourhoods can have a positive impact on people's lives by enhancing comfort, safety, well-being, health, and accessibility. It can also foster social interaction, cohesion, a sense of belonging, cultural identity and community⁸⁴, respect for common spaces⁸⁵, etc.⁸⁶

Furthermore, the attention to aesthetic values in the design of street furniture can contribute to local economies by attracting new visitors (e.g. developing creative tourism) and supporting

⁸⁰ See definition in the Glossary section of the NEB part of the HE WP25.

⁸¹ Action Plan to support the protection of public spaces, COM/2017/0612

⁸² See definition in the Glossary section of the NEB part of the HE WP25.

⁸³ See definition in the Glossary section of the NEB part of the HE WP25

⁸⁴ See definition in the Glossary section of the NEB part of the HE WP25.

⁸⁵ See definition in the Glossary section of the NEB part of the HE WP25.

⁸⁶ As discussed in several studies, such as: Mehta, V. (2014). *Evaluating Public Space*. *Journal of Urban Design*, 19(1), 53-88; Cozens, P. M., & Love, T. (2015). *A Review and Current Status of Crime Prevention through Environmental Design (CPTED)*. *Journal of Planning Literature*, 30(4), 393-412; Gehl, J. (2011). *Life Between Buildings: Using Public Space*; Carmona, M. (2019). *Principles for Public Space Design, Planning to Do Better*. *Urban Design International*, 24(1), 47-59; Whyte, W. H. (1980). *The Social Life of Small Urban Spaces*.

local businesses, cultural and creative sectors and industries, and social economy entities and enterprises.

More prototyping and demonstration are essential to speed up the integration of innovative street furniture, that offer more attractive, sustainable, and inclusive design solutions for common spaces, following the values and principles of the New European Bauhaus⁸⁷.

Proposals are expected to address all of the following:

- Develop and demonstrate innovative designs for sets of street furniture which:
 - o Contribute to a functional common space throughout the year that includes relevant features such as resilience to vandalism and weather, protection from the effects of climate change, consideration of local specificities (such as coastal areas), and low maintenance cost.
 - o Improve the environmental performance of street furniture and, where relevant, integrate nature-based solutions⁸⁸, and sustainable, secondary (bio-based), recycled or upcycled materials as well as a digital dimension.
 - o Strengthen the aesthetic and cultural integrity of the history of the common space and the neighbourhoods.
 - o Meet the needs of different population groups throughout time (through modular and adaptive designs, and considering age, gender, mobility, etc.) by improving comfort, safety, accessibility, social interaction and well-being.
- Apply participatory methods while co-designing and prototyping innovative street furniture.
- Based on the research insights, produce recommendations to inform procurement processes for street furniture.

To achieve this, project consortia may provide financial support to SMEs, education or research institutions, and other relevant actors (such as not-for profit entities) in the form of Financial Support to Third Parties (FSTP). Given the type of action and its level of ambition, the amount to be granted to each third party may be a maximum of EUR 100 000 to allow for the prototyping and demonstration of the innovative designs.

Proposals are expected to follow a participatory and transdisciplinary approach through the integration of different actors (such as public authorities, local actors from the targeted neighbourhoods, civil society, actors from the cultural and creative sectors) and disciplines (such as architecture or design, arts and crafts, (civil) engineering, health).

⁸⁷ See definitions for NEB values and NEB working principles in the Glossary section of the NEB part of the HE WP25.

⁸⁸ See definition in the Glossary section of the NEB part of the HE WP25

This topic requires the effective contribution of social sciences and humanities⁸⁹ (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals are expected to dedicate at least 0.2% of their total budget to share their intermediate and final results and findings with the Coordination and Support Action 'New European Bauhaus hub for results and impact' (HORIZON-MISS-2024-NEB-01-03).

HORIZON-NEB-2025-01-PARTICIPATION-04: Network of neighbourhoods for innovative policies on gentrification

Call: A research agenda for a beautiful, inclusive and sustainable transformation of neighbourhoods	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 2.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025)⁹⁰.</p>

Expected Outcome:

Project results are expected to contribute to all of the following expected outcomes:

⁸⁹ See definition in the Glossary section of the NEB part of the HE WP25.

⁹⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

- Increased use of policies to mitigate the negative consequences of gentrification and enhance its positive impacts (e.g. revitalization, sustainable economic growth, diversity and integration) in urban, peri-urban, and rural neighbourhoods⁹¹.
- Increased capacity of local policymakers to anticipate and mitigate the negative consequences of gentrification when designing and implementing policies in alignment with the New European Bauhaus.
- Empowered local communities⁹² engaging in decision-making processes to mitigate the negative consequences of gentrification due to the regeneration of neighbourhoods.

Scope:

Strategies and interventions to regenerate neighbourhoods may lead to gentrification, a process that can bring revitalization, sustainable economic growth, diversity and integration but also segregation, insecurity, exclusion, displacement, loss of cultural identity, and socio-economic inequality. Mitigating the negative consequences of gentrification cannot be achieved without policy innovation.

This topic supports informal networking among neighbourhoods to exchange knowledge and experiences, build their capacity, facilitate innovation in policymaking to mitigate the negative consequences of gentrification – including green gentrification⁹³ – that may result from interventions aligned with the New European Bauhaus.

Proposals are expected to address all of the following:

- Create a bottom-up network of neighbourhoods with a (potential) risk of gentrification, to facilitate peer exchange among all relevant stakeholders. Proposals should aim for the participation of at least 15 neighbourhoods located in urban, peri-urban and rural areas from different Member States and Associated Countries.
- Map neighbourhoods' needs, challenges, trends and opportunities to inform policies and interventions that mitigate the negative consequences of gentrification and of integrating the New European Bauhaus values and principles⁹⁴.
- Identify, document, and disseminate current knowledge, evidence, policy design, tools, and best practices for tackling gentrification and translate the results into useful tools that address the identified needs, challenges and opportunities.
- Support local decision makers in better understanding:
 - o The main drivers of gentrification (such as overtourism, interim use and short term rental markets).

⁹¹ See definition in the Glossary section of the NEB part of the HE WP25.

⁹² See definition in the Glossary section of the NEB part of the HE WP25

⁹³ See definition in the Glossary section of the NEB part of the HE WP25.

⁹⁴ See definitions of NEB values and NEB working principles in the Glossary section of the NEB part of the HE WP25.

- o The effect of housing market speculation, rental agreements and (lack of) housing policies (e.g. fiscal measures, funding instruments, legislative measures) on gentrification.
- o The effects of gentrification on different socio-demographic groups, as well as on local identities and cultural heritage.
- o The interplay between urban, peri-urban and rural gentrification.
- Address the issue of gentrification in the participating neighbourhoods through at least one of the following actions:
 - o Develop or revise local policies (such as those on social/economic/urban development, housing, planning, mobility, green transition) to mitigate the negative consequences of gentrification.
 - o Develop neighbourhood regeneration strategies that include measures to mitigate the negative consequences of gentrification.

Proposals are expected to follow a participatory and transdisciplinary approach⁹⁵ through the integration of different actors (such as local or regional public authorities, local actors from the targeted neighbourhoods, civil society, private owners, cultural institutions, etc.) and disciplines (such as architecture, urban design, design, arts, (civil) engineering).

This topic requires the effective contribution of social sciences and humanities⁹⁶ (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals are expected to dedicate at least 0.2% of their total budget to share their intermediate and final results and findings with the Coordination and Support Action 'New European Bauhaus hub for results and impact' (HORIZON-MISS-2024-NEB-01-03).

⁹⁵ See definition on NEB working principles in the Glossary section of the NEB part of the HE WP25

⁹⁶ See definition in the Glossary section of the NEB part of the HE WP25.

Destination - Circular and regenerative approaches for the built environment

The development of a circular and regenerative European construction ecosystem⁹⁷ is key to support the sustainable competitiveness of the sector, and to achieve our climate, environmental and social ambitions. This implies more sustainable materials but also better use and re-purposing of existing buildings. However, this cannot be achieved without ensuring that people understand, accept and support the necessary transformations.

Although considerable research efforts are underway on this matter, there remain significant gaps. Innovation spreads slowly in the construction ecosystem in the context of construction materials, methods and approaches. For instance, renovations are still not correctly targeted, too expensive, too slow, and often of insufficient quality, resulting in renovation rates that are too low; buildings are inefficiently used and undermine people's well-being; a lack of awareness of sustainable⁹⁸, circular and innovative approaches amongst the different actors of the construction ecosystem; and a market that remains very attached to low costs in the short-term.

In Work Programme 2025, this Destination contributes to the following expected impacts set out in the Horizon Europe Strategic Plan 2025-2027:

- 2. Living and working in a health-promoting environment
- 15. Achieving global leadership in climate-neutral, circular and digitised industrial and digital value chains
- 28. Putting biodiversity on a path to recovery, and protecting and restoring ecosystems and their services
- 31. Sustainably developing rural, urban and coastal areas

The Destination aims to address certain gaps and make the construction ecosystem more sustainable, resilient, circular and regenerative, while also ensuring it is inclusive⁹⁹, accessible and contributes to the health and wellbeing of all living beings. The Destination aims to deliver on this objective by:

- Making buildings, building elements, construction materials and products more sustainable, adaptable, multi-purpose, durable and re-usable, increase their recycling rate and expand their lifespan, leading to a more circular construction ecosystem and a more efficient use of resources. This will contribute to limiting the extraction of new materials and waste generation in the construction ecosystem, thus strengthening the EU's strategic autonomy and contributing to the European Green Deal's objectives, the EU's Zero-Pollution vision for 2050, the new Circular Economy Action Plan, and intergenerational justice. Concepts and solutions that serve the above-mentioned

⁹⁷ See definition in the Glossary section of the NEB part of the HE WP25.

⁹⁸ See definition in the Glossary section of the NEB part of the HE WP25.

⁹⁹ See definition in the Glossary section of the NEB part of the HE WP25.

objectives such as, among others, sufficiency¹⁰⁰, regenerative design¹⁰¹, nature-based solutions¹⁰² or circular bio-fabricated materials¹⁰³ should be explored.

- Improving the climate adaptability¹⁰⁴ and resilience of private or public buildings and common spaces¹⁰⁵ through, for instance, regenerative designs and nature-based solutions that contribute to longevity, resource and energy efficiency, natural ecosystem restoration and overall climate resilience in the face of the environmental evolution.
- Collecting, processing and using data and making use of technologies such as Artificial intelligence (AI) in combination with Building Information Modelling (BIM) and digital fabrication to significantly reduce costs, optimise resource utilisation, and enhance efficiency of renovation and construction processes and make construction and renovation more sustainable, circular, regenerative, affordable and culturally sensitive.
- Ensuring that the solutions developed are user-centred and place-based, connect with local cultural identity, historical knowledge and cultural heritage, and answer the needs of and are accepted by people on the ground - including minorities, vulnerable and underrepresented groups -, strengthening the sense of belonging and societal resilience.

This Destination considers neighbourhoods¹⁰⁶ in urban, peri-urban or rural environments.

Proposals are invited against the following topic(s):

HORIZON-NEB-2025-01-REGEN-01: Applying regenerative design to the built environment in neighbourhoods

Call: A research agenda for a beautiful, inclusive and sustainable transformation of neighbourhoods	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.00 million.
<i>Type of Action</i>	Innovation Actions

¹⁰⁰ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁰¹ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁰² See definition in the Glossary section of the NEB part of the HE WP25.

¹⁰³ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁰⁴ See EU-level technical guidance on adapting buildings to climate change. Best practice guidance, March 2023 (<https://build-up.ec.europa.eu/en/resources-and-tools/publications/best-practice-guidance-buildings-adaptability-climate-change>) .

¹⁰⁵ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁰⁶ See definition in the Glossary section of the NEB part of the HE WP25.

<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.

Expected Outcome:

Project results are expected to contribute to all of the following expected outcomes:

- Tested and proven principles of regenerative design¹⁰⁷ in the design, construction and renovation of the built environment¹⁰⁸ are available to the actors from the construction ecosystem¹⁰⁹.
- Improved tools and technologies enable actors from the construction ecosystem to apply regenerative design to the built environment.
- The application of regenerative design to the built environment in neighbourhoods¹¹⁰ contributes to the regeneration of natural ecosystems and biodiversity while benefiting human health and well-being.

Scope:

Regenerative design¹¹¹ aims to actively restore, revitalise and enhance ecosystems, contributing to both human and planetary health, in line also with the ‘One Health’ approach¹¹². Regenerative design thus contributes to creating sustainable¹¹³, thriving environments for local communities and ecosystems. This involves principles such as circularity, waste reduction, resource and energy efficiency, promoting biodiversity, and the use of carbon-storing materials.

Regenerative design offers pathways to develop construction and renovation methods and designs that go beyond conventional approaches. However, the potential and application of regenerative design in the built environment is still under-explored due to the novelty of the

¹⁰⁷ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁰⁸ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁰⁹ See definition in the Glossary section of the NEB part of the HE WP25.

¹¹⁰ See definition in the Glossary section of the NEB part of the HE WP25.

¹¹¹ See definition in the Glossary section of the NEB part of the HE WP25.

¹¹² Regenerative design and development: current theory and practice (<https://www.tandfonline.com/doi/epdf/10.1080/09613218.2012.617516?needAccess=true>); <https://www.cdc.gov/one-health/about/index.html#:~:text=One%20Health%20is%20a%20collaborative,plants%2C%20and%20the%20shared%20environment>.

¹¹³ See definition in the Glossary section of the NEB part of the HE WP25.

solutions, the complexity of inter-related factors, the limited understanding of their impacts, and insufficient knowledge exchange and technology transfer.

Proposals are expected to address all of the following:

- Analyse in depth the success factors, challenges, and impacts of at least 10 existing examples of regenerative designs applied to constructed or renovated buildings. Measure the restoration of the environment as well as sustainability performance of the building, using existing sustainable building assessment methods such as [Level\(s\), the Living Community Challenge](#) and other third-party certification schemes or emerging methodologies such as the Carbon Removal and Carbon Farming (CRCF) in buildings certification. The selected buildings are expected to:
 - o Be located in contexts as diverse as possible (geographical, environmental, climate, social or economic).
 - o Generate renewable energy to meet the buildings' energy demand. The buildings can also employ, but are not limited to: nature-based solutions¹¹⁴; water collection, purification and reuse; water efficiency methods; building solutions achieving cleaner air; carbon-storing architecture and design; medium and long-term energy storage (e.g. using phase-change materials).
 - o Have used collaborative, inclusive approaches to engage local communities and inhabitants.
 - o Have overcome legislative and regulatory barriers, if any, thanks to active collaboration with different levels of government and public authorities.
- Develop and demonstrate at least one innovative solution (tool or technology) that facilitate the application of regenerative design to the built environment. The solution(s) is (are) expected to transform the construction and renovation processes at all stages, by adopting a lifecycle perspective, encouraging the use of natural resources, materials, products, processes and by considering the impact on people and nature. Proposers should reflect on the role of local/indigenous crafts and knowledge¹¹⁵ in the construction and renovation processes.
- Demonstrate the innovative solution(s) in at least three neighbourhoods from urban, peri-urban and rural areas located in at least three Member States or Associated Countries.

The topic includes the possibility to provide financial support to third parties to provide direct support for the development and implementation of the demonstrator. A maximum of EUR 60 000 per third party might be granted.

¹¹⁴ See definition in the Glossary section of the NEB part of the HE WP25.

¹¹⁵ See definition in the Glossary section of the NEB part of the HE WP25.

Proposals are expected to follow a participatory and transdisciplinary approach¹¹⁶ through the integration of different actors (such as public authorities, local actors from the targeted neighbourhoods, civil society, private owners, etc.) and disciplines (such as architecture, urban design, design, arts, (civil) engineering, health, etc.).

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals are expected to dedicate at least 0.2% of their total budget to share their intermediate and final results and findings with the Coordination and Support Action 'New European Bauhaus hub for results and impact' (HORIZON-MISS-2024-NEB-01-03).

HORIZON-NEB-2025-01-REGEN-02: Bio-fabricated materials for sustainable and beautiful construction

Call: A research agenda for a beautiful, inclusive and sustainable transformation of neighbourhoods	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome:

Project results are expected to contribute to all of the following expected outcomes:

- Bio-fabricated construction materials¹¹⁷ and their beneficial properties are better known and accepted by construction ecosystem¹¹⁸ professionals.
- Innovative, sustainably sourced, beautiful¹¹⁹ bio-fabricated construction materials can be produced at mass-scale at competitive costs.

¹¹⁶ See definition on NEB working principles in the Glossary section of the NEB part of the HE WP25

¹¹⁷ See definition in the Glossary section of the NEB part of the HE WP25.

¹¹⁸ See definition in the Glossary section of the NEB part of the HE WP25.

¹¹⁹ See definition in the Glossary section of the NEB part of the HE WP25.

Scope:

Along with the current paradigm shift towards a sustainable¹²⁰ and circular bioeconomy and the use of circular design principles in the built environment, new materials and innovative technologies are emerging to help reach zero-waste goals and the lowest environmental impact. Bio-fabricated materials open new avenues for reaching higher ambitions in terms of sustainability, especially if associated with high-technological solutions that can accelerate and simplify their manufacturing, retrofitting and renewal.

Bio-fabricated materials and their potential as an alternative to conventional materials are still underexplored. The widespread integration of bio-fabricated materials in the built environment¹²¹ faces several barriers, from technical and regulatory hurdles to high production costs, limited knowledge and expertise among construction professionals, and low acceptance by the construction ecosystem. Bio-fabricated materials and their potential as an alternative to conventional materials are underexplored.

Research is required to investigate new ways to address the main technical challenges of bio-fabricated materials.

Proposals are expected to address all of the following:

- Develop and test at least two innovative sustainable bio-fabricated construction materials that:
 - o Have innovative features compared to current materials on the market (such as, but not limited to, the capacity to self-repair, to adapt to an evolving environment, to store carbon or act as a carbon sink, to heat and/or cool buildings, extended lifespan, etc.).
 - o Can be used for interior, exterior or structural purposes.
 - o Comply with relevant EU standards and regulatory frameworks.
- For each material developed:
 - o Assess its properties, benefits, as well as design and construction applications. This should cover at least the structural, mechanical, thermal, acoustic, health-related, durability and aesthetic properties and take into consideration the variations within a changing environment (e.g. weather conditions).
 - o Study the feasibility for mass-scale production to increase production volumes and affordability. This should consider the use of high-technological manufacturing techniques and processes (such as 3D printing, robotics, building information modelling (BIM), parametric design, high-performance sensor, artificial intelligence (AI), etc.).

¹²⁰ See definition in the Glossary section of the NEB part of the HE WP25.

¹²¹ See definition in the Glossary section of the NEB part of the HE WP25.

- o Analyse the environmental footprint of the bio-fabricated materials following a life cycle assessment (LCA) approach to validate their contribution to the reduction of the whole life carbon emissions in the built environment.
- o Analyse the social and economic impacts throughout the material's whole life cycle, for example using social life-cycle assessment (SLCA) and life-cycle costing (LCC) approaches.

Proposals are expected to follow a participatory and transdisciplinary approach¹²² through the integration of different actors (such as public authorities, local actors from the targeted neighbourhoods, civil society, private owners, etc.) and disciplines (such as architecture or design, arts, (civil) engineering, etc.). Proposals are expected to dedicate at least 0.2% of their total budget to share their intermediate and final results and findings with the Coordination and Support Action 'New European Bauhaus hub for results and impact' (HORIZON-MISS-2024-NEB-01-03).

HORIZON-NEB-2025-01-REGEN-03: Sufficiency measures in the built environment

Call: A research agenda for a beautiful, inclusive and sustainable transformation of neighbourhoods	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 5 by the end of the project – see General Annex B. Activities may start at any TRL.

Expected Outcome:

Project results are expected to contribute to all of the following expected outcomes:

- Vacant and under-utilised spaces in buildings and other physical spaces in the built environment¹²³ are easier to map, enabling better informed and effective decision-making in the built environment.

¹²² See definition on NEB working principles in the Glossary section of the NEB part of the HE WP25.
¹²³ See definition in the Glossary section of the NEB part of the HE WP25.

- Sufficiency measures¹²⁴, their non-technical barriers as well as their environmental, economic and social impacts are better understood by the built environment professionals such as real estate actors, urban planners or designers.
- Validated sufficiency measures, integrating circular economy¹²⁵ principles, lead to an absolute reduction in demand of the built environment for energy, raw materials, land, water, floor space, and other resources; while extending the lifecycle of spaces, buildings, and infrastructures.

Scope:

Sufficiency is a set of policy measures and practices which reduce the demand for energy, materials, land, water, and other natural resources, while delivering well-being for all within planetary boundaries¹²⁶. It represents an integrated approach to sustainability and circularity, acknowledging and balancing the interplay of decarbonisation and equity¹²⁷.

In the built environment, floor space is considered as a resource. Sufficiency measures seek to optimise the use of existing (vacant and under-utilised) spaces, buildings, and infrastructures¹²⁸. These measures lead to an absolute reduction in demand for new-built floor space¹²⁹, reducing resource consumption, embodied and operational carbon emissions, and other environmental impacts in the built environment¹³⁰. By alleviating strain on land resources, sufficiency measures can help address social issues, such as housing shortages, and reduce infrastructure costs for municipalities.

The potential of sufficiency measures in the built environment is yet under-explored due to data constraints, limited understanding of their impacts, and insufficient knowledge exchange.

Proposals are expected to address all of the following:

- Test and validate an approach to map and quantify vacant and under-utilised spaces with high sufficiency potential in the built environment.
- Test and validate at least two sufficiency measures that optimise, repurpose, or expand the use and functionality of space. Proposals are expected to test the proposed

¹²⁴ This is unlike efficiency where resource reduction is relative to any output.

¹²⁵ See definition in the Glossary section of the NEB part of the HE WP25.

¹²⁶ Intergovernmental Panel on Climate Change (IPCC) 2022

¹²⁷ European Commission: Directorate-General for Environment, Le Den, X., Steinmann, J., Kovacs, A., Kockat, J. et al., *Supporting the development of a roadmap for the reduction of whole life carbon of buildings – Final technical report*, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2779/849252>

¹²⁸ According to Eurostat, 38% of buildings in the EU (28) are underoccupied, with a rate higher than 60% in 4, and higher than 50% in 7 Member States. (Eurostat (2018) [Overcrowded and under-occupied dwellings - Products Eurostat News - Eurostat \(europa.eu\)](#))

¹²⁹ Unlike efficiency, the resource reduction achieved through sufficiency is absolute and not relative to any output.

¹³⁰ Muench, S., Stoermer, E., Jensen, K., Asikainen, T., Salvi, M. and Scapolo, F., *Towards a green and digital future*, EUR 31075 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-52451-9, doi:10.2760/977331, JRC129319.

sufficiency measures in at least three neighbourhoods¹³¹ in urban, peri-urban and rural areas located in at least three Member States or Associated Countries.

- Quantify the potential for the proposed sufficiency measures to contribute to an absolute reduction in demand for floor space and resources (including, as a minimum, energy, raw materials, land, and water) in the built environment.
- Propose and validate solutions to overcome non-technical barriers in the built environment towards sufficiency measures (e.g. regulatory barriers or acceptance).

Proposals are expected to follow a participatory and transdisciplinary approach¹³² through the integration of different actors (such as public authorities, local actors from the targeted neighbourhoods, civil society, private owners, etc.) and disciplines (such as architecture or design, arts, (civil) engineering, etc.).

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals are expected to dedicate at least 0.2% of their total budget to share their intermediate and final results and findings with the Coordination and Support Action 'New European Bauhaus hub for results and impact' (HORIZON-MISS-2024-NEB-01-03).

HORIZON-NEB-2025-01-REGEN-04: Innovative approaches for sustainable, inclusive and beautiful social and affordable housing

Call: A research agenda for a beautiful, inclusive and sustainable transformation of neighbourhoods	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial</i>	The rules are described in General Annex G. The following

¹³¹ See definition in the Glossary section of the NEB part of the HE WP25.

¹³² See definition on NEB working principles in the Glossary section of the NEB part of the HE WP25.

<i>set-up of the Grant Agreements</i>	exceptions apply: Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.
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Expected Outcome:

Project results are expected to contribute to all of the following expected outcomes:

- Reduced costs for both the construction and renovation of social and affordable housing¹³³ without sacrificing quality.
- Increased availability and affordability of quality housing for diverse and vulnerable populations across Europe.
- Significantly reduced energy consumption, carbon emissions, and resource use in social and affordable housing as well as improved climate adaptability and resilience to climate change of social and affordable housing.
- Higher awareness of the construction ecosystem¹³⁴ and the real estate sector of innovative approaches that increase affordability and sustainability of housing.

Scope:

An increasing number of new building technologies and construction methods became available on the market in recent years that can make construction and renovation more sustainable¹³⁹. Current policies and regulations set ambitious standards (e.g., in terms of energy efficiency and carbon footprint), which come with higher initial investment costs, making the provision of sustainable, high-quality social and affordable housing in many European neighbourhoods a challenge.

Innovative approaches are necessary to make the best use of available building technologies and construction methods to improve climate adaptability and resilience and reduce energy consumption, carbon emissions and resource use in social and affordable housing while delivering housing that is affordable, inclusive¹⁴³ and improves well-being, in line with the European Commission's Affordable Housing Initiative¹⁴⁴.

Proposals are expected to address all of the following:

- Develop innovative approaches for the construction of new buildings and the renovation or retrofitting of existing buildings in the social and affordable housing sector. These innovative approaches must relate to how construction and renovation services are defined, procured, delivered, financed and/or managed.

¹³³ This topic also considers social care homes, elderly houses, and other form of inclusive housing with residential function complemented with social welfare as forms of social and affordable housing.

¹³⁴ See definition in the Glossary section of the NEB part of the HE WP25.

- Define and implement in two social and affordable housing projects two ambitious packages of measures that comprise building technologies and construction methods already on the market. One package of measures must be applied to a new construction and the other to a building renovation or retrofitting. They will address all of the following:
 - o Use existing building technologies and construction methods that improve the efficiency and speed of construction and renovation or retrofitting (such as off-site construction, modular building systems, smart meters, big data analysis, sensors, and predictive maintenance).
 - o Use environmentally sustainable practices, such as nature-based solutions¹³⁵ or carbon-storing materials to reduce energy consumption, carbon footprint, pollution, and resource use throughout the building's life cycle while also possibly increasing buildings' resilience and adaptability to natural, including climate change-induced, and human-made hazards.
 - o Ensure that social and affordable housing is aesthetically pleasing and contributes positively to the landscape of the place where it is located, while also respecting local context and the architectural heritage.
 - o Improve the well-being, inclusion and general living conditions of all inhabitants.
 - o For renovations or retrofitting only: minimise and mitigate, where possible, disruptions for residents and improve accessibility of buildings.

Social care homes, elderly houses, and other forms of inclusive housing with residential function complemented with social welfare are also considered as eligible for development and testing of cross-cutting innovative solutions developed by the projects.

To achieve this, project consortia may provide financial support to SMEs and social housing actors in the form of Financial Support to Third Parties (FSTP). The amount to be granted to each third party may be a maximum of EUR 60 000.

Proposals are expected to follow a participatory and transdisciplinary approach¹³⁶ through the integration of different actors (such as public authorities, local actors from the targeted neighbourhoods, civil society, private owners, etc.) and disciplines (such as architecture or design, arts, (civil) engineering, health, etc.).

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

¹³⁵ See definition in the Glossary section of the NEB part of the HE WP25.

¹³⁶ See definition on NEB working principles in the Glossary section of the NEB part of the HE WP255.

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Proposals are expected to dedicate at least 0.2% of their total budget to share their intermediate and final results and findings with the Coordination and Support Action 'New European Bauhaus hub for results and impact' (HORIZON-MISS-2024-NEB-01-03).

DRAFT

Destination - Innovative funding and new business models for the transformation of neighbourhoods

The built environment¹³⁷ faces diverse challenges that hinder its transition towards greater sustainability¹³⁸, circularity¹³⁹, and social inclusion¹⁴⁰. It has traditionally been resistant to change due to established norms, practices, and a conservative mindset, especially regarding the renovation of existing buildings and infrastructures. For the built environment to change and adapt, appropriate market conditions and business demand and incentives must be in place.

New business models can disrupt the status quo by providing a framework to rethink how renovation projects are designed, planned, and executed and how they contribute to shaping and re-shaping neighbourhood¹⁴¹ structures and spaces and support initiatives such as the EU Renovation Wave¹⁴². Demonstrating their economic, environmental, societal, and cultural feasibility and benefits can drive the built environment and other related ecosystems (e.g. financial, insurance, social economy) towards circular and sustainable practices that are resilient to natural, including climate change-induced, and human-made hazards. At the same time, new business models can promote new values such as affordability, inclusion, diversity, functionality, and beauty¹⁴³.

Developing new business models and coupling them with innovative funding mechanisms is crucial to encourage the uptake of new practices and approaches that do not only ensure cost-effectiveness and efficiency but align with and contribute to larger societal goals and values, driving positive cultural, social, and environmental change in the built environment and enhancing the ecosystem's long-term sustainability and competitiveness.

In Work Programme 2025, this Destination contributes to the following expected impacts set out in the Horizon Europe Strategic Plan 2025-2027:

- 8. Realising the full potential of cultural heritage, arts, and cultural and creative sectors
- 9. Strengthening social and economic resilience and sustainability
- 15. Achieving global leadership in climate-neutral, circular and digitized industrial and digital value chains

Proposals for topics under this Destination should set out a credible pathway to contributing to innovative funding and new business models for the transformation of neighbourhoods, and more specifically to one or several of the following impacts:

¹³⁷ See definition in the Glossary section of the NEB part of the HE WP25.

¹³⁸ See definition in the Glossary section of the NEB part of the HE WP25.

¹³⁹ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁴⁰ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁴¹ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁴² Additional information at: https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/renovation-wave_en

¹⁴³ See definition in the Glossary section of the NEB part of the HE WP25.

- Innovative supply chains and new incipient business models in the built environment are based on circular economy¹⁴⁴ principles, life cycle thinking, and sustainable practices and are economically attractive. They reclaim, reuse, and re-assemble construction products at local and regional scales, reducing resource consumption, waste and litter generation, environmental footprint, and reliance on resource-intensive, linear practices.
- Innovative processes, methods, and techniques for the renovation of buildings and infrastructures leverage design innovation, creativity, cultural heritage, economies of scale, and cost-effective technologies. They are economically attractive and affordable and contribute to the high-quality, sustainable, inclusive, and resilient revitalisation of neighbourhoods in urban, peri-urban and rural environments.
- Public authorities, investors, construction developers, inhabitants and community¹⁴⁵ groups, and other relevant neighbourhood and built environment stakeholders overcome perceived barriers and risks (e.g. market demand, consumer preferences, and price sensitivity) associated with renovation projects in line with the New European Bauhaus. Incentives, including financial rewards, regulatory advantages, and positive public perception are in place and contribute to the wider adoption of innovative funding and new business models for the sustainable, inclusive and beautiful revitalisation of neighbourhoods.
- Inhabitants and other neighbourhood stakeholders, including marginalised and vulnerable groups, engage in public decision-making, co-create their neighbourhoods in response to local needs and specificities, and benefit from increased well-being and living conditions.
- Increased investment in neighbourhood transformation projects in line with the New European Bauhaus. Projects generate and investors receive returns beyond financial capital, including environmental, aesthetic, social, and cultural value.

This Destination considers neighbourhoods in urban, peri-urban, and rural environments.

Proposals are invited against the following topic(s):

HORIZON-NEB-2025-01-BUSINESS-01: Renovating the built environment through design for adaptability and disassembly.

Call: A research agenda for a beautiful, inclusive and sustainable transformation of neighbourhoods

Specific conditions

Expected EU contribution per

The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately.

¹⁴⁴ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁴⁵ See definition in the Glossary section of the NEB part of the HE WP25.

<i>project</i>	Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹⁴⁶ .

Expected Outcome:

Project results are expected to contribute to all of the following expected outcomes:

- More sustainable¹⁴⁷ and inclusive¹⁴⁸ renovation of existing buildings and common spaces and/or infrastructures based on design for adaptability and disassembly.
- Processes, methods, and/or techniques are available for the modular adaptation and repurposing of existing buildings, common spaces, and infrastructures, drawing on historical knowledge and assessments of their past and present condition and functions to inform renovation strategies.
- Public authorities, investors, construction project owners, developers, architects, designers, and SSH actors have access to evidence of the economic, environmental, social, cultural, financial, and regulatory impacts and understand the business case for design for adaptability and disassembly-based renovation processes, methods, and/or techniques compared to conventional renovations.

Scope:

Design for adaptability and disassembly is a concept for the design of buildings, common spaces¹⁴⁹, and infrastructures integrating circular economy¹⁵⁰ principles for greater economic, environmental and social sustainability. It presents significant potential for the renovation of

¹⁴⁶ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁴⁷ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁴⁸ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁴⁹ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁵⁰ See definition in the Glossary section of the NEB part of the HE WP25.

the built environment by allowing for easy adaptation of spaces and structures to changing needs and uses or technological advancements.

Renovating with modular components and elements that can be dis- and re-assembled and thereby repurposed across different applications further supports the long-term use, adaptation, and repurposing of buildings, common spaces, and infrastructures. This maximises their economic value (by retaining the embedded value of construction materials, components, and elements), improves their environmental performance (by reducing waste and the extraction of new raw materials and resources), and avoids their demolition as well as the construction of new structures.

The application of design for adaptability and disassembly has focused on new constructions. However, most structures and spaces in urban, peri-urban and rural areas have already been built and require adaptation and repurposing for new and updated uses and functions. Therefore, research should address design for adaptability and disassembly for the renovation of existing buildings, common spaces, and infrastructures.

Proposals are expected to address all of the following:

- Develop at least two renovation processes, methods, and/or techniques based on design for adaptability and disassembly that enable the future adaptation and repurposing of buildings, common spaces, and infrastructures with minimal usage disruption.
- Demonstrate the developed solutions in at least two pilots in at least two Member States or Associated Countries. At least one of the pilots must target a building and at least one of the pilots must target a common space and/or an infrastructure.
- Assess the barriers (including economic, environmental, cultural, social (including related to human capital and skills), and regulatory) to the market uptake of the developed solutions compared to conventional renovation processes, methods, and techniques, and propose solutions to overcome them.
- Quantify, wherever feasible, the environmental (including whole life carbon assessments, carbon pricing, energy efficiency¹⁵¹, ecosystem services), economic (including reduced resource consumption costs), social (including the response to changing neighbourhood¹⁵² needs), cultural (including the regeneration of cultural meanings and heritage in neighbourhoods), financial and regulatory impacts of the processes, methods, and techniques, while considering the specificities of the local context.
- Use and build on indicators provided in the European framework for sustainable buildings ‘Level(s)’¹⁵³.

¹⁵¹ Using tools or frameworks such as the [Energy Performance of Buildings Directive](#).

¹⁵² See definition in the Glossary section of the NEB part of the HE WP25.

¹⁵³ For additional information: https://environment.ec.europa.eu/topics/circular-economy/levels_en

Proposals are expected to follow a participatory and transdisciplinary approach¹⁵⁴ through the integration of different actors (such as public authorities, local actors from the targeted neighbourhoods, construction project owners, developers, investors, etc.) and disciplines (such as architecture or design, (civil) engineering, etc.).

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals are expected to dedicate at least 0.2% of their total budget to share their intermediate and final results and findings with the Coordination and Support Action 'New European Bauhaus hub for results and impact' (HORIZON-MISS-2024-NEB-01-03).

HORIZON-NEB-2025-01-BUSINESS-02: Bottom-up social entrepreneurship for the co-creation of neighbourhoods in line with the New European Bauhaus

Call: A research agenda for a beautiful, inclusive and sustainable transformation of neighbourhoods	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹⁵⁵ .

Expected Outcome:

¹⁵⁴ See definition on NEB working principles in the Glossary section of the NEB part of the HE WP25.

¹⁵⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Project results are expected to contribute to all of the following expected outcomes:

- New scientific evidence of how bottom-up social entrepreneurship shapes and contributes to the co-creation of neighbourhoods in line with the values of the New European Bauhaus¹⁵⁶.
- Inhabitants (including marginalised and vulnerable groups) and civil society actors share knowledge and experiences and have the capacity to cooperate and engage in bottom-up social entrepreneurship.
- Bottom-up social entrepreneurship increases inhabitants' quality of life and well-being, fosters social cohesion, and creates new economic impulses and employment opportunities in neighbourhoods.

Scope:

Bottom-up social entrepreneurship¹⁵⁷ can act as a key driver of sustainable¹⁵⁸ and inclusive¹⁵⁹ neighbourhood co-creation in line with the values of the New European Bauhaus. Bottom-up social entrepreneurship leverages local expertise to tackle local social and environmental challenges. It can generate local economic value, create new and inclusive employment opportunities, leverage cultural and creative industries, and address the segregation of different community and civil society groups, including marginalised and vulnerable inhabitants.

Research is required on the various aspects of using bottom-up social entrepreneurship for the co-creation of neighbourhoods.

Proposals are expected to address all of the following:

- Deliver at least 3 bottom-up social entrepreneurship pilots in at least 3 Member States or Associated Countries to explore how bottom-up social entrepreneurship can shape and contribute to the co-creation of neighbourhoods in line with the values of the New European Bauhaus¹⁶⁰.
- Analyse for each pilot the local social, cultural, economic, financial, regulatory, and legal barriers and drivers and how they can shape the market uptake and competitiveness of bottom-up social enterprises and initiatives.
- Assess for each pilot the business case and the potential for bottom-up social entrepreneurship to create impact and attract (impact) investment opportunities.

¹⁵⁶ See definitions in the Glossary section of the NEB part of the HE WP25.

¹⁵⁷ Social entrepreneurship encompasses different formats and types of organisations such as small businesses, collectively owned companies, cooperatives, civil society and community-building initiatives, neighbourhood associations, grassroots initiatives, community land-trusts, etc.

¹⁵⁸ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁵⁹ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁶⁰ See definition in the Glossary section of the NEB part of the HE WP25.

- Demonstrate how cooperations between inhabitants and civil society actors can foster the exchange of knowledge and experiences and build their capacity to engage in bottom-up social entrepreneurship. These cooperations should take into consideration place-based specificities and be grounded in strong public-private partnerships including grassroots neighbourhoods associations, public authorities, local businesses, and the social economy, etc.
- Demonstrate how bottom-up social entrepreneurship can increase the quality of life and well-being of inhabitants, strengthen social cohesion, and foster a shared sense of belonging in neighbourhoods.
- Assess how the above may impact future co-creation and decision-making in the development of neighbourhoods in line with the New European Bauhaus.

Proposals are expected to follow a participatory and transdisciplinary approach¹⁶¹ through the integration of different actors (such as public authorities, local actors from the targeted neighbourhoods, including from the social economy and civil society, investors etc.) and disciplines (such as architecture or design, arts, business, economics, finance, etc.).

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals are expected to dedicate at least 0.2% of their total budget to share their intermediate and final results and findings with the Coordination and Support Action 'New European Bauhaus hub for results and impact' (HORIZON-MISS-2024-NEB-01-03).

HORIZON-NEB-2025-01-BUSINESS-03: Reverse local construction supply chains for the beautiful re-assembly of reclaimed construction products

Call: A research agenda for a beautiful, inclusive and sustainable transformation of neighbourhoods	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Legal and financial</i>	The rules are described in General Annex G. The following exceptions

¹⁶¹ See definition on NEB working principles in the Glossary section of the NEB part of the HE WP25.

<i>set-up of the Grant Agreements</i>	apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) ¹⁶² .
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Expected Outcome:

Project results are expected to contribute to all of the following expected outcomes:

- Innovative approaches, methods, and techniques for the safe and sustainable ¹⁶³ re-assembly of construction products in ways that increase the aesthetic and cultural value of the built environment in line with the New European Bauhaus.
- Increased re-assembly of construction products at neighbourhood ¹⁶⁴, local, and regional level.
- New scientific evidence on the social, cultural, economic, and environmental (including reduced resource consumption, reduced waste and litter generation, including microplastic pollution, and carbon storage ¹⁶⁵) benefits, on new business opportunities and models, and on value and revenue streams for the beautiful re-assembly of reclaimed construction products at neighbourhood, local, and regional level.

Scope:

The move towards increased renovation and the greater reuse of construction products in the built environment ¹⁶⁶ has created a growing interest in new business models and approaches centred on modularity, adaptability, disassembly, and sufficiency ¹⁶⁷. Whereas significant research and practice has focused on the disassembly, collection, sorting, and re-processing of construction products, less attention has been directed so far to their later re-assembly.

The re-assembly stage is key for the re-integration of increasing quantities of reclaimed ¹⁶⁸ construction products into new applications. Concurrently, the endeavour to transform the

¹⁶² This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under ‘Simplified costs decisions’ or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

¹⁶³ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁶⁴ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁶⁵ Considering tools such as Carbon Removals and Carbon Farming (CRCF) certification for buildings.

¹⁶⁶ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁶⁷ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁶⁸ Reclaimed construction products are understood to include secondary ones that are auxiliary to the primary structural construction components, such as insulation, cladding, tiles, nails, bolts, decorative elements, etc.

built environment along the New European Bauhaus values¹⁶⁹ of sustainability, inclusion, and beauty creates opportunities to re-think how to re-assemble reclaimed construction products safely and creatively in ways that increase the aesthetic and cultural value of buildings and infrastructures, enhancing inhabitants' well-being and living conditions.

The re-assembly of safe and sustainable reclaimed construction products requires solid knowledge of their historical uses and characteristics as well as traceability of their condition and displacement. Digital tools and technologies such as Digital Product Passports and reverse construction supply chains¹⁷⁰, following the circular economy's¹⁷¹ cascading principle for bio-based materials¹⁷² and 10R-Strategies (refuse, reduce, resell/reuse, repair, refurbish, remanufacture, repurpose, recycle, recover, re-mine)¹⁷³ for non-biobased materials, are key for the effective management, movement and reuse of safe reclaimed construction products.

Local reverse construction supply chains that re-circulate safe construction products as locally as possible have the potential to maximise economic value and resource utilisation, reduce waste, pollution, energy use, procurement costs, and the environmental footprint of construction and renovation activities, and foster creativity and innovation towards greater circularity and the regeneration of social and cultural meanings in the built environment.

Proposals are expected to address all of the following:

- Explore at least one innovative approach, method, or technique to re-assemble construction products in ways that increase their embedded economic and environmental value and the aesthetic value of buildings and building ensembles by exploring existing aesthetic and cultural standards in the built environment.
- The proposed innovative solution(s) should consider the reassembled construction products' environmental footprint and the availability of reclaimed construction materials and components at neighbourhood, local or regional level. Proposals should build, where possible, on existing circular construction product pooling networks and platforms, construction logistics hubs as well as informal markets for reused construction products.
- Validate how the proposed innovative solution(s) create new value, revenue streams and business opportunities, building, wherever possible, upon existing research on related business models in the field.

Proposals are expected to follow a participatory and transdisciplinary approach¹⁷⁴ through the integration of different actors (such as public authorities, local actors from the targeted neighbourhoods, civil society, private owners, material suppliers, etc.) and disciplines (such

¹⁶⁹ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁷⁰ Additional information at: <https://www.sciencedirect.com/science/article/pii/S1877705817360265>

¹⁷¹ See definition in the Glossary section of the NEB part of the HE WP25.

¹⁷² See [Guidance on cascading use of biomass with selected good practice examples on woody biomass](#)

¹⁷³ See Chapter 3 "Conceptualization of Circular Economy 3.0: Synthesizing the 10R Hierarchy of Value Retention Options" in

¹⁷⁴ See definition on NEB working principles in the Glossary section of the NEB part of the HE WP25.

as architecture, urban design, design, arts, (civil) engineering, economics, finance, business, etc.).

Proposals are expected to dedicate at least 0.2% of their total budget to share their intermediate and final results and findings with the Coordination and Support Action 'New European Bauhaus hub for results and impact' (HORIZON-MISS-2024-NEB-01-03).

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Other actions not subject to calls for proposals

1. Commission expert group for advice on the NEB Facility

Objective and scope:

The members of the Commission expert group for the New European Bauhaus¹⁷⁵ provide advice to support the work of the European Commission in the implementation phase of the research and innovation and roll-out components of the NEB Facility.

The members of the Commission expert group are required to provide advice based on deep knowledge in fields corresponding to the implementation of the NEB Facility such as business, public administration, science, climate change mitigation and adaptation, research and innovation, arts, culture, citizen engagement, and integrated urban development, and expertise in cross-sector/cross-border collaboration, governance, etc. It includes advice on achieving synergies between Horizon Europe and other EU programmes and policy areas as well as with national initiatives.

Considering the advisory role of the expert group, conflict of interest must be prevented and confidentiality must be respected notably when pertaining to work programme and other EU initiatives it will work on and to evaluation aspects.

The expert group provides high-level advice to the Commission of such a nature that, without their input, the implementation the NEB Facility would not achieve the desired large scale and breadth of impact. In light of this, and as highly qualified, specialised, independent experts, it is justified that the members of the expert groups are remunerated for the services they offer pursuant to Article 21 of the Commission's horizontal rules on expert groups ('the horizontal rules')¹⁷⁶.

A special allowance of 450 EUR /day will be paid to the members of the expert group appointed in their personal capacity who act independently and in the public interest. This amount is considered to be proportionate to the specific tasks to be assigned to the experts, including the number of meetings to be attended and possible preparatory work¹⁷⁷.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative timetable: 2nd Quarter 2025

Indicative budget: EUR 0.28 million from the 2025 budget¹⁷⁸

¹⁷⁵ [Register of Commission expert groups and other similar entities \(europa.eu\)](https://european-council.europa.eu/media/en/press-communications/pages/Press-communication-14247.aspx)

¹⁷⁶ C(2016) 3301

¹⁷⁷ C(2016) 3301

¹⁷⁸ The contribution from each Cluster to the NEB Facility for the year 2025 is the following: EUR 23 549 608 for Cluster 1, EUR 3 063 844 for Cluster 2, EUR 2 099 596 for Cluster 3, EUR 18 376 009 for Cluster 4, EUR 43 620 527 for Cluster 5 and EUR 27 971 031 for Cluster 6.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative budget: EUR 0.28 million from the 2025 budget

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Budget^{179 180}

	2025 Budget (EUR million)
Calls	
HORIZON-NEB-2025-01	118.40
Other actions	
Expert contract action	0.28
Estimated total budget	118.68

¹⁷⁹ The budget figures given in this table are rounded to two decimal places.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2025.

¹⁸⁰ The contribution from each Cluster to the New European Bauhaus Facility work programme part for the year 2025 is the following: EUR 23.55 million for Cluster 1, EUR 3.06 million for Cluster 2, EUR 2.10 million for Cluster 3, EUR 18.38 million for Cluster 4, EUR 43.62 million for Cluster 5 and EUR 27.97 million for Cluster 6.

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Horizon Europe
Work Programme 2025

14. General Annexes

IMPORTANT NOTICE:

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

This draft is made public before the adoption of the work programme to provide potential participants with the currently expected main lines of this work programme. Only the adopted work programme will have legal value.

The adoption of the work programme will be announced on the Horizon Europe website and on the Funding and Tenders Portal.

Information and topic descriptions indicated in this draft may not appear in the final work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

The Commission expressly disclaims liability for any future changes of the content of this document.

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INTRODUCTION

These General Annexes set out the general conditions applicable to calls and topics for grants and other forms of funding under the Horizon Europe main work programme. They also describe the evaluation and award procedures and other criteria for Horizon Europe funding. In particular, the General Annexes outline the:

- admissibility and eligibility criteria for participation and for receiving funding, the criteria for having the financial and operational capacity and for exclusion (Annexes A-C);
- award criteria, mandatory documents and evaluation procedure (Annexes D-F);
- legal and financial set-up of the grant agreements (Annex G);
- specific conditions applying to actions which include pre-commercial procurement or procurement of innovative solutions (Annex H).

If a topic deviates from the general conditions or includes additional conditions, this is explicitly stated under the specific conditions for the topic.

Applicants are invited to read the call documentation on the topic page of the Funding & Tenders Portal (‘Portal’) carefully, and particularly these General Annexes, the [Horizon Europe Programme Guide](#)¹, the [EU Funding & Tenders Portal Online Manual](#)² and the [EU Grants AGA — Annotated Grant Agreement](#)³. These documents provide clarifications and answers to questions on preparing the application.

 Please note that calls launched by the European Research Council (ERC), the European Innovation Council (EIC), the European Institute of Innovation and Technology (EIT), the Institutionalised European Partnerships based on Articles 185 and 187 of the Treaty on the Functioning of the European Union (TFEU), calls under the Euratom Research and Training Programme and the activities of the European Commission Joint Research Centre (JRC) are subject to separate work programmes and thus not covered by these General Annexes.

¹ The Horizon Europe Programme Guide outlines the detailed guidance on the structure, budget and political priorities of Horizon Europe.

² The Online Manual outlines the procedures to register and submit applications online via the EU Funding & Tenders Portal and recommendations on preparing the application.

³ The AGA — Annotated Grant Agreement contains detailed annotations on all the provisions in the grant agreement that must be signed to obtain the grant.

GENERAL CONDITIONS

A — Admissibility

Admissibility

Applications must be submitted before the **call deadline**.

Applications must be submitted **electronically** via the Funding & Tenders Portal electronic submission system (accessible via the topic page in the [Search Funding & Tenders](#) section). Paper submissions are NOT possible.

Applications must be submitted using the forms provided *inside* the electronic submission system (not the templates available on the topic page, which are only for information). The structure and presentation must correspond to the instructions given in the forms.

Applications must be **complete** and contain all parts and mandatory Annexes and supporting documents (*see Annex E below*).

Applications must be **readable, accessible and printable**.

Applications must include **a plan for the exploitation and dissemination of results including communication activities**, unless provided otherwise in the specific call/topic conditions. The plan is not required for applications at the first stage of two-stage procedures. If the expected exploitation of the results entails developing, creating, manufacturing and marketing a product or process, or in creating and providing a service, the plan must include a strategy for such exploitation. If the plan provides for exploitation of the results primarily in non-associated third countries, the applicants must explain how that exploitation is to be considered in the EU's interest.

Where provided for in the specific call/topic conditions, applicants submitting a proposal under the blind evaluation pilot (*see Annex F below*) must not disclose their organisation names, acronyms, logos nor names of personnel in the proposal abstract and Part B of their first-stage application (*see Annex E below*).

Page limits

In addition to the above admissibility conditions, page limits will apply to parts of applications. The page limits, and sections subject to limits, will be clearly shown in the application templates in the Funding & Tenders Portal electronic submission system.

Unless provided otherwise in the specific call/topic conditions, **the limit for a full application is 45 pages** (except for 'Coordination and support' actions, where the limit is 30 pages, and for 'Programme co-fund' actions, where the limit is 70 pages). For topics using lump sum funding, the limit for 'Research and Innovation' actions and 'Innovation' actions is 50 pages and the limit for 'Coordination and support' action is 33 pages.

The limit for a first-stage application is 10 pages.

If an application exceeds the limits, there will be an automatic warning and invitation to re-submit a version that conforms to these limits. After the call deadline, excess pages will be automatically made invisible, and will not be taken into consideration by the evaluators.

B — Eligibility

Entities eligible to participate

Any legal entity, regardless of its place of establishment, including legal entities from non-associated third countries or international organisations (including international European research organisations⁴) is eligible to participate (whether it is eligible for funding or not), provided that the conditions laid down in the Horizon Europe Regulation⁵ have been met, along with any other conditions laid down in the specific call/topic.

A ‘legal entity’ means any natural or legal person created and recognised as such under national law, EU law or international law, which has legal personality and which may, acting in its own name, exercise rights and be subject to obligations, or an entity without legal personality⁶.

Beneficiaries and affiliated entities must register in the [Participant Register](#) before submitting their application, in order to get a participant identification code (PIC) and be validated by the Central Validation Service before signing the grant agreement. For the validation, they will be asked to upload the necessary documents showing their legal status and origin during the grant preparation stage. A validated PIC is not a prerequisite for submitting an application.

 For more information, see [Rules for Legal Entity Validation, LEAR Appointment and Financial Capacity Assessment](#).

Specific cases:

Affiliated entities — Affiliated entities (i.e. entities with a legal or capital link to a beneficiary⁷ which participate in the action with similar rights and obligations to the beneficiaries, but which do not sign the grant agreement and therefore do not become beneficiaries themselves) are allowed, if they are eligible for participation and funding.

Associated partners — Associated partners (i.e. entities which participate in the action without signing the grant agreement, and without the right to charge costs or claim contributions) are allowed, subject to any specific call/topic conditions.

Entities without legal personality — Entities which do not have legal personality under their national law may exceptionally participate, provided that their representatives have the capacity

⁴ ‘International European research organisation’ means an international organisation, the majority of whose members are Member States or Associated Countries, and whose principal objective is to promote scientific and technological cooperation in Europe.

⁵ Regulation (EU) 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe (OJ L 170 , 12.5.2021, p. 1).

⁶ See Article 200(2)(c) EU Financial Regulation [2024/2509](#).

⁷ See Article 190 EU Financial Regulation [2024/2509](#).

to undertake legal obligations on their behalf, and offer guarantees to protect the EU's financial interests equivalent to those offered by legal persons⁸.

EU bodies — Legal entities created under EU law including decentralised agencies may be part of the consortium, unless provided for otherwise in their basic act.

Joint Research Centre ('JRC') — Where provided for in the specific call/topic conditions, applicants may include in their proposals the possible contribution of the JRC but the JRC will not participate in the preparation and submission of the proposal. Applicants will indicate the contribution that the JRC could bring to the project based on the scope of the topic text. After the evaluation process, the JRC and the consortium selected for funding may come to an agreement on the specific terms of the participation of the JRC. If an agreement is found, the JRC may accede to the grant agreement as beneficiary requesting zero funding or participate as an associated partner, and would accede to the consortium as a member.

Associations and interest groupings — Entities composed of members (e.g. European research infrastructure consortia (ERICs)) may participate as 'sole beneficiaries' or 'beneficiaries without legal personality'⁹. However, if the action is in practice implemented by the individual members, those members should also participate either as beneficiaries or as affiliated entities (otherwise their costs will NOT be eligible).

Restrictions on participation in Innovation Actions — In accordance with the 2019 "EU-China – A Strategic outlook" communication, the 2021 "Global Approach to Research and Innovation" communication, and the joint conclusions of the 4th EU-China Innovation Cooperation Dialogue of 2019, an exercise to develop a Joint Roadmap for the future of EU-China cooperation in science, technology, and innovation (Roadmap) has been established between the EU and China. It has the objective to develop a level playing field for engagement between the EU and China in the areas of science, technology, and innovation (STI) that is respectful of fundamental research and innovation values and principles. This endeavor is to be achieved through an agreement on the framework conditions contained in the Roadmap and their monitoring and evaluation. As progress so far has mainly taken place on the framework conditions linked to research rather than on those related to innovation, and taking into account the nature and objectives in particular of Innovation Actions, cooperation with entities established in China needs to be calibrated accordingly.

Legal entities established in China are therefore not eligible to participate in Horizon Europe Innovation Actions in any capacity. This includes participation as beneficiaries, affiliated entities, associated partners, third parties giving in-kind contributions, subcontractors or recipients of financial support to third parties (if any). Exceptions may be granted on a case-by-case basis for justified reasons. The above eligibility criteria may be reviewed in the future in accordance with policy developments. This exclusion is justified under Article 22(6) of the Horizon Europe Regulation given the substantive concerns regarding the use of intellectual property generated under this publicly funded programme, and the ongoing discussions

⁸ See Article 200(2)(c) EU Financial Regulation [2024/2509](#).

⁹ See Articles 190(2) and 200(2)(c) EU Financial Regulation [2024/2509](#).

between China and the EU on the Joint Roadmap for the future of EU-China cooperation in science, technology, and innovation.

Restrictions for the protection of European communication networks — The protection of European communication networks has been identified as an important security interest of the Union and its Member States¹⁰. In line with the Commission Recommendation on the cybersecurity of 5G networks of 2019¹¹ and the subsequent report on the EU coordinated risk assessment of the cybersecurity of 5G networks of 2019,¹² the EU Toolbox on 5G cybersecurity,¹³ the second report on Member States' progress in implementing the EU toolbox on 5G cybersecurity of 2023,¹⁴ and the related Communication on the implementation of the 5G cybersecurity toolbox of 2023,¹⁵ the Commission together with the Member States has worked to jointly identify and assess cyberthreats and security risks for 5G networks¹⁶. The toolbox also recommends adding country-specific information (e.g. threat assessment from national security services, etc.). This work is an essential component of the Security Union Strategy and supports the protection of electronic communications networks and other critical infrastructures.

Entities assessed as “high-risk suppliers”, are currently set out in the second report on Member States' progress in implementing the EU toolbox on 5G cybersecurity of 2023¹⁷ and the related Communication on the implementation of the 5G cybersecurity toolbox of 2023¹⁸.

The toolbox also underlines that further developing European capacities in the area of 5G and post-5G technologies by leveraging EU Research & Innovation Funding programmes is a strategic risk mitigating measure. This entails the need to avoid the participation of high-risk supplier entities in the development of other technologies linked to the evolution of European communication networks to prevent technology transfer and the persistence of dependencies in materials, semiconductor components (including processors), computing resources, software tools and virtualisation technologies, as well as related cybersecurity.

In order to protect the specific policy requirements of the Union and/or its Member States, it is therefore appropriate that the following additional eligibility criteria apply to actions identified as “subject to restrictions for the protection of European communication networks” and to proposals within the Marie Skłodowska-Curie Actions (MSCA) part¹⁹ that concern the evolution of European communication networks (5G, post-5G and other technologies linked to the evolution of European communication networks):

¹⁰ European Council conclusions of 1 and 2 October 2020 (EUCO 13/20), point 11; Council Conclusions on the significance of 5G to the European Economy and the need to mitigate security risks linked to 5G, 14517/19.

¹¹ Commission Recommendation (EU) 2019/534 of 26 March 2019 Cybersecurity of 5G networks, L 88/42.

¹² NIS Cooperation Group, Report on EU coordinated risk assessment of the cybersecurity of 5G networks, 9 October 2019.

¹³ NIS Cooperation Group, EU Toolbox on 5G Cybersecurity, 29 January 2020.

¹⁴ NIS Cooperation Group, Second report on Member States' progress in implementing the EU Toolbox on 5G Cybersecurity, June 2023.

¹⁵ Communication from the Commission: Implementation of the 5g cybersecurity Toolbox, Brussels, 15.6.2023 C(2023) 4049 final.

¹⁶ Within the NIS framework NIS 1 + 2 (Directive - 2022/2555 - EN - EUR-Lex (europa.eu))

¹⁷ NIS Cooperation Group, Second report on Member States' progress in implementing the EU Toolbox on 5G Cybersecurity, June 2023.

¹⁸ Communication from the Commission: Implementation of the 5G cybersecurity Toolbox, Brussels, 15.6.2023 C(2023) 4049 final.

¹⁹ Doctoral Networks, Postdoctoral Fellowships, Staff Exchanges, Cofund.

Entities that are assessed as high-risk suppliers of mobile network communication equipment (and any entities they own or control) are not eligible to participate as beneficiaries, affiliated entities and associated partners.

The assessment is based on the following criteria:

- likelihood of interference from a non-associated third country, for example due to:
 - the characteristics of the entity's ownership or governance (e.g. state-owned or controlled, government/party involvement);
 - the characteristics of the entity's business and other conduct (e.g. a strong link to a third country government);
 - the characteristics of the respective third country (e.g. legislation or government practices likely to affect the implementation of the action, including an offensive cyber/intelligence policy, pressure regarding place of manufacturing or access to information).
- (cyber-)security practices, including throughout the entire supply chain;
- risks identified in relevant assessments of Member States and third countries as well as other EU institutions, bodies and agencies, if relevant.

Exceptions may be requested from the granting authority and will be assessed case-by-case, taking into account the criteria provided for in the 5G cybersecurity toolbox, the security risks and availability of alternatives in the context of the action.

Restrictions on participation or control — In line with Article 22(5) of the Horizon Europe Regulation, for actions related to EU strategic assets, interests, autonomy or security, the specific call/topic conditions may limit participation to legal entities established only in EU Member States or in EU Member States and specific associated or non-associated third countries. In this case, the eligible countries will be identified in the specific call/topic conditions. In addition, for duly justified and exceptional reasons, to guarantee protection of the strategic interests of the EU and its Member States, the specific call/topic conditions may also exclude the participation of legal entities directly or indirectly controlled by non-eligible third countries or by legal entities of non-eligible third countries (or make their participation subject to specific conditions).

EU restrictive measures — Entities subject to [EU restrictive measures](#) under Article 29 of the Treaty on the European Union (TEU) and Article 215 of the Treaty on the Functioning of the EU (TFEU)²⁰ as well as Article 75 TFEU²¹, are not eligible to participate in any capacity, including as beneficiaries, affiliated entities, associated partners, third parties giving in-kind contributions, subcontractors or recipients of financial support to third parties (if any).

²⁰ Please note that the EU Official Journal contains the official list and, in case of conflict, its content prevails over that of the [EU Sanctions Map](#).

²¹ Please note that the EU Official Journal contains the official list and, in case of conflict, its content prevails over that of the [EU Sanctions Map](#).

Special rules also apply to entities covered by Commission Guidelines No 2013/C 205/05²².

Legal entities established in Russia, Belarus, or in non-government controlled territories of Ukraine — Given the illegal invasion of Ukraine by Russia and the involvement of Belarus, there is currently no appropriate context allowing the implementation of the actions foreseen in this programme with legal entities established in Russia, Belarus, or in non-government controlled territories of Ukraine. Therefore, even where such entities are not subject to EU restrictive measures, such legal entities are not eligible to participate in any capacity. This includes participation as beneficiaries, affiliated entities, associated partners, third parties giving in-kind contributions, subcontractors or recipients of financial support to third parties (if any). Exceptions may be granted on a case-by-case basis for justified reasons.

With specific regard to measures addressed to Russia, following the adoption of the Council Regulation (EU) 2024/1745 of 24 June 2024²³ (amending Council Regulation (EU) No 833/2014 of 31 July 2014) concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine, legal entities established outside Russia but whose proprietary rights are directly or indirectly owned for more than 50% by a legal person, entity or body established in Russia are also not eligible to participate in any capacity.

Measures for the protection of the Union budget against breaches of the principles of the rule of law in Hungary — Following the [Council Implementing Decision \(EU\) 2022/2506](#), as of 16 December 2022, no legal commitments can be entered into with Hungarian public interest trusts established under the Hungarian Act IX of 2021 or any entity they maintain. Affected entities may continue to apply to calls for proposals and can participate without receiving EU funding, as associated partners, if allowed by the call conditions. However, as long as the Council measures are not lifted, such entities are not eligible to participate in any funded role (beneficiaries, affiliated entities, subcontractors, recipients of financial support to third parties, etc.). In case of multi-beneficiary grant calls, applicants will be invited to remove or replace that entity in any funded role and/or to change its status into associated partner. Tasks and budget may be redistributed accordingly.

Entities eligible for funding

To become a beneficiary, legal entities must be eligible for funding.

To be eligible for funding, applicants must be established in one of the following countries:

- the Member States of the European Union, including their outermost regions:

Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia,
Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania,

²² Commission guidelines No [2013/C 205/05](#) on the eligibility of Israeli entities and their activities in the territories occupied by Israel since June 1967 for grants, prizes and financial instruments funded by the EU from 2014 onwards (OJEU C 205 of 19.07.2013, pp. 9-11).

²³ (OJ L 229, 31.7.2014, p. 1-11).

Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.

- the Overseas Countries and Territories (OCTs) linked to the Member States:

Aruba (NL), Bonaire (NL), Curaçao (NL), French Polynesia (FR), French Southern and Antarctic Territories (FR), Greenland (DK), New Caledonia (FR), Saba (NL), Saint Barthélemy (FR), Sint Eustatius (NL), Sint Maarten (NL), St. Pierre and Miquelon (FR), Wallis and Futuna Islands (FR).

- countries associated to Horizon Europe²⁴;

Albania, Armenia, Bosnia and Herzegovina, Canada, Faroe Islands, Georgia, Iceland, Israel, Kosovo²⁵, Moldova, Montenegro, New Zealand, North Macedonia, Norway, Serbia, Tunisia, Türkiye, Ukraine, United Kingdom²⁶. Other third countries may become associated to Horizon Europe during the programme. For the purposes of the eligibility conditions, applicants established in other third countries negotiating association to Horizon Europe will be treated as entities established in an Associated Country, if the Horizon Europe association agreement with the third country concerned applies at the time of signature of the grant agreement.

- the following low- and middle-income countries:²⁷.

Afghanistan, Algeria, Angola, Argentina, Azerbaijan, Bangladesh, Belarus, Belize, Benin, Bhutan, Bolivia, Botswana, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Central African Republic, Chad, Colombia, Comoros, Congo (Democratic Republic), Congo (Republic), Costa Rica, Côte d'Ivoire, Cuba, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt (Arab Republic), El Salvador, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Fiji, Gabon, Gambia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Indonesia, Iran (Islamic Republic), Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Korea (Democratic People's Republic), Kyrgyz Republic, Lao (People's Democratic Republic), Lebanon, Lesotho, Liberia, Libya, Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritania, Mauritius, Micronesia (Federated States), Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Niger, Nigeria, Niue,

²⁴ The list is correct at the time of adoption of this Work Programme. Please see the [Horizon Europe List of Participating Countries](#) on the Portal for up-to-date information on the current list and on the position for Associated Countries.

²⁵ This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

²⁶ The United Kingdom is associated to the entire Horizon Europe Programme, with the only exception of the EIC fund (which is part of the EIC Accelerator of Horizon Europe that provides investment through equity or other repayable form), for award procedures implementing Union budget for the year 2024 and onwards.

²⁷ The list is correct at the time of adoption of this Work Programme. See the [Horizon Europe List of Participating Countries](#) on the Portal for a up-to-date list of these countries.

Pakistan, Palau, Palestine²⁸, Papua New Guinea, Paraguay, Peru, Philippines, Rwanda, Samoa, São Tomé and Príncipe, Senegal, Sierra Leone, Solomon Islands, Somalia, South Africa, South Sudan, Sri Lanka, St. Lucia, St. Vincent and the Grenadines, Sudan, Suriname, Syrian Arab Republic, Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tonga, Turkmenistan, Tuvalu, Uganda, Uzbekistan, Vanuatu, Venezuela (Bolivarian Republic), Vietnam, Yemen Republic, Zambia, Zimbabwe.

Legal entities which are established in countries not listed above will be eligible for funding if provided for in the specific call/topic conditions, or if their participation is considered essential for implementing the action by the granting authority.

Specific cases:

Affiliated entities — Affiliated entities are eligible for funding if they are established in one of the countries listed above, or in a country identified in the specific call/topic conditions.

Associated partners — Entities not eligible for funding (and therefore not able to participate as beneficiaries) may participate as associated partners, unless specified otherwise in the specific call/topic conditions.

Coordination and Support Actions — To be eligible to participate as beneficiaries (or affiliated entities) in ‘Coordination and support’ actions, legal entities must be established in a Member State or Associated Country, unless the specific call/topic conditions provide otherwise (in which case the general rules for eligibility for funding apply). Legal entities established in a non-associated third country may, however, participate in ‘Coordination and support’ actions as associated partners, unless this is explicitly excluded by the specific call/topic conditions.

EU bodies — Legal entities created under EU law may also be eligible to receive funding, unless their basic act states otherwise.

International organisations — International European research organisations are eligible to receive funding. International organisations with headquarters in a Member State or Associated Country are eligible to receive funding for ‘Training and mobility’ actions or when provided for in the specific call/topic conditions. Other international organisations are not eligible to receive funding, unless provided for in the specific call/topic conditions, or if their participation is considered essential for implementing the action by the granting authority.

Consortium composition

Unless otherwise provided for in the specific call/topic conditions, only legal entities forming a consortium are eligible to participate in actions provided that the consortium includes, as beneficiaries, three legal entities independent from each other and each established in a different country as follows:

²⁸ This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.

- at least one independent legal entity established in a Member State; and
- at least two other independent legal entities, each established in different Member States or Associated Countries.

As affiliated entities do not sign the grant agreement, they do not count towards the minimum eligibility criteria for consortium composition (if any).

The Joint Research Centre, international European research organisations and legal entities created under EU law are deemed to be established in a Member State other than those in which the other legal entities participating in the action are established.

Applications for ‘Training and mobility’ actions and for ‘Programme co-fund’ actions may be submitted by one or more legal entities, provided that one of those legal entities is established in a Member State or an Associated Country.

Applications for ‘Coordination and support’ actions may be submitted by one or more legal entities, which may be established in a Member State, Associated Country or, in exceptional cases and if provided for in the specific call/topic conditions, in another third country.

Applications for ‘Pre-commercial procurement’ actions and ‘Public procurement of innovative solutions’ actions must also fulfil the eligibility criteria of three independent legal entities as beneficiaries as explained above, out of which a minimum of two beneficiaries must be independent legal entities that are public procurers²⁹, each established in a different Member State or Associated Country and with at least one of them established in a Member State.

Eligible activities

Eligible activities are the ones described in the call conditions. Applications will only be considered eligible if their content corresponds, wholly or in part, to the topic description for which it is submitted.

Projects must focus exclusively on civil applications and must not:

- aim at human cloning for reproductive purposes;
- intend to modify the genetic heritage of human beings which could make such changes heritable (except for research relating to cancer treatment of the gonads, which may be financed);
- intend to create human embryos solely for the purpose of research, or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer.

Projects must, moreover, comply with EU policy interests and priorities (environment, social, security, industrial policy, etc.).

The following activities are generally eligible for grants under Horizon Europe:

²⁹ ‘Public procurers’ are organisations that are contracting authorities or contracting entities as defined in EU public procurement directives 2014/24/EU, 2014/25/EU, and 2009/81/E.

Research and innovation actions (RIA) — Activities that aim primarily to establish new knowledge or to explore the feasibility of a new or improved technology, product, process, service or solution. This may include basic and applied research, technology development and integration, testing, demonstration and validation of a small-scale prototype in a laboratory or simulated environment.

Innovation actions (IA) — Activities that aim directly to produce plans and arrangements or designs for new, altered or improved products, processes or services. These activities may include prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.

Coordination and support actions (CSA) — Activities that contribute to the objectives of Horizon Europe. This excludes research and innovation (R&I) activities, except those carried out under the ‘Widening participation and spreading excellence’ component of the programme (part of ‘Widening participation and strengthening the European Research Area’). Also eligible are bottom-up coordination actions which promote cooperation between legal entities from Member States and Associated Countries to strengthen the European Research Area, and which receive no EU co-funding for research activities.

Programme co-fund actions (CoFund) — A programme of activities established or implemented by legal entities managing or funding R&I programmes, other than EU funding bodies. Such a programme of activities may support: networking and coordination; research; innovation; pilot actions; innovation and market deployment; training and mobility; awareness raising and communication; and dissemination and exploitation. It may also provide any relevant financial support, such as grants, prizes and procurement, as well as Horizon Europe blended finance³⁰ or a combination thereof. The actions may be implemented by the beneficiaries directly or by providing financial support to third parties.

Innovation and market deployment actions (IMDA) — Activities that embed an innovation action and other activities necessary to deploy an innovation on the market. This includes the scaling-up of companies and Horizon Europe blended finance.

Training and mobility actions (TMA) — Activities that aim to improve the skills, knowledge and career prospects of researchers, based on mobility between countries and, if relevant, between sectors or disciplines.

Pre-commercial procurement actions (PCP) — Activities that aim to help a transnational buyers’ group to strengthen the public procurement of research, development, validation and, possibly, the first deployment of new solutions that can significantly improve quality and efficiency in areas of public interest, while opening market opportunities for industry and researchers active in Europe. Eligible activities include the preparation, management and follow-up, under the coordination of a lead procurer, of one joint PCP and additional activities to embed the PCP into a wider set of demand-side activities.

³⁰ ‘Horizon Europe blended finance’ means financial support for innovation and market deployment activities, consisting of a specific combination of a grant or reimbursable advance and an investment in equity or any other repayable form of support.

Public procurement of innovative solutions actions (PPI) — Activities that aim to strengthen the ability of a transnational buyers' group to deploy innovative solutions early by overcoming the fragmentation of demand for such solutions and sharing the risks and costs of acting as early adopters, while opening market opportunities for industry. Eligible activities include preparing and implementing, under the coordination of a lead procurer, one joint or several coordinated PPI by the buyers' group and additional activities to embed the PPI into a wider set of demand-side activities.

Technology Readiness Levels

Where the specific call/topic conditions require a Technology Readiness Level (TRL), the following definitions apply, unless otherwise specified:

- TRL 1 — Basic principles observed
- TRL 2 — Technology concept formulated
- TRL 3 — Experimental proof of concept
- TRL 4 — Technology validated in a lab
- TRL 5 — Technology validated in a relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 6 — Technology demonstrated in a relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 7 — System prototype demonstration in an operational environment
- TRL 8 — System complete and qualified
- TRL 9 — Actual system proven in an operational environment (competitive manufacturing in the case of key enabling technologies, or in space)

Ethics

Projects must comply with ethical principles (including the highest standards of research integrity) and applicable EU, international and national law.

Applicants must have completed the ethics self-assessment as part of their application.

 For more information, see [How to complete your ethics self-assessment](#).

Projects involving ethics issues will have to undergo an ethics review to authorise funding and may be made subject to specific ethics requirements. These requirements become part of the grant agreement as ethics deliverables, e.g. ethics committee opinions/authorisations required under national or EU law.

Security — EU classified and sensitive information

Projects involving classified and/or sensitive information will have to go through the security appraisal process to authorise funding and may be made subject to specific security rules (detailed in the Security Section, which is annexed to the grant agreement). Specific provisions for EU classified information (EUCI) and sensitive information (SEN) will be included in the grant agreement, as necessary and appropriate.

The rules for protecting EU classified information (governed by Commission Decision (EU, Euratom) [2015/444](#)³¹ and/or national rules) provide for instance that:

- projects involving information classified as TRES SECRET UE/EU TOP SECRET (or equivalent) can NOT be funded;
- EU classified information must be marked in accordance with the applicable security instructions in the Security Classification Guide appendix of the Security Aspects Letter (SAL), which is contained in the Security Section of the grant agreement;
- generation of, or access to, information with classification levels CONFIDENTIEL UE/EU CONFIDENTIAL or above (and RESTREINT UE/EU RESTRICTED, if required by national rules) may take place only on the premises of entities which have been granted a facility security clearance (FSC) issued by the competent national security authority (NSA);
- handling of information classified CONFIDENTIEL UE/EU CONFIDENTIAL or above (and RESTREINT UE/EU RESTRICTED, if required by national rules) may take place only in a secured area accredited by the competent NSA;
- access to and handling of information classified CONFIDENTIEL UE/EU CONFIDENTIAL or above may be granted only to individuals with a valid personnel security clearance (PSC) and an established need-to-know, who have been briefed on the applicable security rules;
- access to, and handling of, information classified RESTREINT UE/EU RESTRICTED may be granted only to individuals who have a need-to-know and have been briefed on the applicable security rules;
- at the end of the grant, the classified information must either be returned or continue to be protected according to the applicable rules;
- subcontracting of tasks involving EU classified information is subject to prior written approval by the European Commission, which is the originator of EU classified information. It is only possible to subcontract these tasks to entities established in an EU Member State or in a non-EU country with a security of information agreement with the EU (or an administrative arrangement with the Commission);

³¹ See Commission Decision (EU, Euratom) 2015/444 of 13 March 2015 on the security rules for protecting EU classified information (OJ L 72, 17.3.2015, p. 53).

- disclosure of EU classified information is subject to prior written approval by the European Commission.

Depending on the type of activity, FSCs may have to be provided before the grant is signed. The granting authority will assess this for each case and fix the delivery date during the grant preparation stage. It is not possible to sign any grant agreement before at least one of the beneficiaries in the consortium has an FSC.

In certain cases, the project results might not require classification, but they might be sensitive and require restricted disclosure or limited dissemination for security reasons, according to the applicable instructions in the Security Section. This means that, in principle, third parties should have no access to results subject to this type of restriction. Disclosure of this information is subject to prior written approval by the European Commission.

Further security recommendations may be added to the grant agreement in the form of security deliverables (e.g. establishing a security advisory board, appointing a project security officer, limiting the level of detail, using a fake scenario, etc.).

In addition, beneficiaries must ensure that their projects are not subject to national/third-country security requirements that could affect implementation or put into question the award of the grants (e.g. technology restrictions, national security classification, etc.). Any potential security issues must be notified immediately to the granting authority.

Gender equality plans and gender mainstreaming

Beneficiaries must take all measures to promote equal opportunities between men and women in implementing the action and, where applicable, in line with their gender equality plan. They must aim to achieve, to the extent possible, a gender balance at all levels of personnel assigned to the action, including at supervisory and managerial level.

In addition, to be eligible, legal entities from Member States and Associated Countries that are public bodies, research organisations or higher education establishments (including private research organisations and higher education establishments) must have a gender equality plan, covering the following minimum process-related requirements:

- publication: a formal document published on the institution's website and signed by the top management;
- dedicated resources: commitment of resources and expertise in gender equality to implement the plan;
- data collection and monitoring: sex/gender disaggregated data on personnel (and students, for the establishments concerned) and annual reporting based on indicators;
- training: awareness raising/training on gender equality and unconscious gender biases for staff and decision-makers.

Content-wise, it is recommended that the gender equality plan addresses the following areas, using concrete measures and targets:

- work-life balance and organisational culture;
- gender balance in leadership and decision-making;
- gender equality in recruitment and career progression;
- integration of the gender dimension into research and teaching content;
- measures against gender-based violence, including sexual harassment.

A self-declaration will be requested at proposal stage. If all the above-mentioned mandatory requirements are met through another strategic document, such as a development plan or an inclusion or diversity strategy, it can be considered as an equivalent. This eligibility criterion does not apply to other categories of legal entities, such as private for-profit organisations, including SMEs, non-governmental or civil society organisations

Financial support to third parties

Where the specific call/topic conditions allow for financial support to third parties, the applicants must clearly describe in their proposal the objectives and the expected results, including the elements listed in the application template. The following conditions must also be fulfilled:

- projects must publish their open calls widely and adhere to EU standards of transparency, equal treatment, conflict of interest and confidentiality;
- all calls for third parties and all calls that are implemented by third parties must be published on the Funding & Tenders Portal, and on the beneficiaries' websites;
- the calls must remain open for at least 2 months;
- if submission deadlines are changed, this must immediately be announced and registered applicants must be informed of the change;
- projects must publish the outcome of the calls without delay, including a description of third-party projects, the date of the award, the duration, and the legal name of the third party and country of establishment;
- the calls must have a clear European dimension.

Further conditions may be stipulated in the specific conditions for the topic.

 For more information, see AGA — *Annotated Model Grant Agreement*, Articles 6.2.D.1 and 9.4.

OTHER TYPES OF ACTIONS AND FORMS OF FUNDING

The following types of action and forms of funding are also used in Horizon Europe. They are usually placed in the 'Other Actions' section of the work programme parts and are not all subject to calls for proposals.

- **Grants to identified beneficiaries** — Exceptionally, a grant may be awarded to legal entities without a prior call for proposals in accordance with the exceptions set out in Article 198 of the Financial Regulation (including to entities explicitly named in the work programme). The beneficiaries of such actions must nevertheless submit a proposal to benefit from funding. This proposal will be evaluated and must meet the required threshold. The funding rates will correspond to the type of action indicated.
- **Prizes** — Prize means a financial contribution given as a reward following a contest. *Inducement prizes*: a prize to stimulate investment in a given area, by specifying a goal prior to the work being performed. Contests for inducement prizes must address technological and/or societal challenges. The award criteria will define a goal, but without prescribing how to achieve it. Contests for inducement prizes are split into awards for the contestant that first meets the specific goal defined in the rules of the contest, and awards for the best contestant within a given period. *Recognition prizes*: a prize to reward past achievements and outstanding work after it has been performed. Recognition prizes must help to raise public awareness of EU policies, create role models and support best practice exchange. The Rules of the contest of a specific prize provide for the admissibility, eligibility, exclusion and award criteria, the prize amount and categories (if applicable) the evaluation procedure, the indicative timetable and the modalities of payment. The rules are found on the call topic page on the Funding & Tenders Portal.
- **Framework partnerships and specific grant agreements** — Framework partnerships are formalised long-term cooperation mechanisms involving several or recurring grants. They must be based on jointly agreed action plans and agreements that set out the terms and conditions for receiving grants to implement the actions, framework partnership agreements (FPA) and specific grant agreements (SGA). The FPA will set out the framework conditions governing potential grants to beneficiaries on the basis of an action plan and jointly agreed general objectives. The SGA will set out the specific obligations and conditions to implement the specific action. The FPA will have no budget; the budget and rules on funding will be set out in each SGA and depend on the specific type of action. The establishment of an FPA must take place following a call for proposals. Beneficiaries will be identified from the evaluation of the proposals. In a subsequent step, beneficiaries may be invited to submit their proposals for the SGA. Framework partnerships do not give the partners (i.e. potential beneficiaries) exclusive rights to be awarded the grants covered by the FPAs. SGAs must only be signed if the FPA has been signed, and before the end date of the FPA.
- **Operating grants** — Operating grants provide financial support for the functioning of a body to enable it to carry out specific activities set out in the agreed work programme. Operating grants do not support the implementation of a specific action, but rather the annual operating budget (or part of it) for certain bodies whose statutory activities serve the strategic objectives of EU policies. Operating grants will always be mono-beneficiary grants supporting the work programme of only one organisation. Operating grants must follow the same rules as described in Annex G, but they do not differentiate between direct and indirect costs. Receiving an operating grant may make beneficiaries ineligible to receive indirect costs in all other EU action grants.
- **Public procurement** — In a public procurement action, the granting authority purchases works, supplies or services, or acquires or rents land, buildings or other immovable property. This is done by entering into a contract with an economic operator chosen by the granting authority. Before the granting authority enters into a procurement contract, a call for tender is published on the Funding & Tenders Portal.
- **Expert contract actions** — Expert contracts are used to appoint independent expert(s) to advise or assist us. Experts are used for evaluating proposals, for evaluating the programme, for ethics screenings and assessments, for advisory bodies, and for expertise related to the objectives of Horizon Europe.
- **Subscription actions** — Subscription actions are used to pay contributions to bodies in which the EU is a member or an observer.
- **Scientific and technical services by the Joint Research Centre** — Scientific and technical services cover research and innovation activities undertaken by the Joint Research Centre of the Commission.
- **Indirectly managed actions** — Indirectly managed actions refer to actions implemented by entities which are entrusted with implementing EU funds or budgetary guarantees through a contribution agreement.
- **Service level agreement actions** — These are actions implemented through a service level agreement. Service level agreements include agreements between Commission departments or, agreements that the Commission may conclude with another Union institution, Union body, or European office involving the provision of services.

C — Financial and operational capacity and exclusion

Financial capacity

Applicants must have **stable and sufficient resources** to successfully implement the projects and contribute their share. Organisations participating in several projects must have sufficient capacity to implement all these projects.

The financial capacity check will be done on the basis of the documents uploaded in the [Participant Register](#) during the grant preparation stage (e.g. profit and loss account and balance sheet, business plan, audit report produced by an approved external auditor, certifying the accounts for the last closed financial year, etc.). The analysis will be based on neutral financial indicators, but will also take into account other aspects, such as dependency on EU funding and deficit and revenue in previous years.

The check will normally be done for the coordinator if the requested grant amount is equal to or greater than EUR 500 000, except for:

- public bodies (entities established as a public body under national law, including local, regional or national authorities) or international organisations; and
- cases where the individual requested grant amount is not more than EUR 60 000 (low-value grant).

If needed, it may also be done for the other applicants, including affiliated entities. If the financial capacity is structurally guaranteed by another legal entity, the financial capacity of that legal entity will be verified.

If the granting authority considers that the financial capacity is not satisfactory, they may require:

- further information;
- an enhanced financial responsibility regime, i.e. joint and several responsibility of affiliated entities (*see Annex G below*); and
- prefinancing paid in instalments;

or

- propose no prefinancing;
- request that the applicant concerned is replaced or, if needed, reject the entire proposal.

i For more information, see [Rules on Legal Entity Validation, LEAR Appointment and Financial Capacity Assessment](#).

Operational capacity

Applicants must have the **know-how, qualifications and resources** to successfully implement their tasks in the project and contribute their share (including, when appropriate, sufficient experience in EU/transnational projects of comparable size).

This assessment of operational capacity will be carried out during the evaluation of the award criterion ‘Quality and efficiency of the implementation’. It will be based on the competence and experience of the applicants and their project teams, including their operational resources (human, technical and other) or, exceptionally, the measures proposed to obtain the necessary competence and experience by the time the tasks are implemented.

If the evaluation of this award criterion leads to a score above the applicable threshold, then the applicants are considered to have sufficient operational capacity.

For this assessment, applicants will be required to provide the following information in the application form:

- description of the consortium participants; and
- for each participant:
 - identity of researchers involved in the proposal (through the researchers table);
 - up to five most relevant publications, widely-used datasets, software, goods, services, or any other achievements relevant to the call content;
 - up to five most relevant previous projects or activities, connected to the subject of this proposal; and
 - description of any significant infrastructure and/or any major items of technical equipment, relevant to the proposed work.

Additional supporting documents may be requested if they are needed to confirm the operational capacity of any applicant.

Public bodies, Member State organisations and international organisations are exempted from the operational capacity check.

Exclusion

Applicants that are subject to **EU administrative sanctions** (i.e. exclusion)³² or are in one of the following **exclusion situations**³³ that bar them from receiving EU grants can NOT participate:

- bankruptcy, winding up, affairs administered by the courts, arrangement with creditors, suspended business activities or other similar procedures (including procedures for persons with unlimited liability for the applicant’s debts);

³² See Article 138 EU Financial Regulation [2024/2509](#).

³³ See Articles 138 and 141 EU Financial Regulation [2024/2509](#).

- they are in breach of social security or tax obligations (including if done by persons with unlimited liability for the applicant's debts);
- they are guilty of grave professional misconduct (including if done by persons having powers of representation, decision-making or control, beneficial owners or persons who are essential for the award/implementation of the grant);
- they are guilty of fraud, corruption, having links to a criminal organisation, money laundering, terrorism-related crimes (including terrorism financing), child labour or human trafficking (including if done by persons having powers of representation, decision-making or control, beneficial owners or persons who are essential for the award/implementation of the grant);
- they have shown significant deficiencies in complying with their main obligations under an EU procurement contract, grant agreement, prize, expert contract, or similar (including if done by persons having powers of representation, decision-making or control, beneficial owners or persons who are essential for the award/implementation of the grant);
- they are guilty of irregularities within the meaning of Article 1(2) of Regulation No [2988/95](#)³⁴ (including if done by persons having powers of representation, decision-making or control, beneficial owners or persons who are essential for the award/implementation of the grant); or
- they have created under a different jurisdiction an entity with the intent to circumvent fiscal, social or other legal obligations in the country of origin or created another entity with this purpose (including if done by persons having powers of representation, decision-making or control, beneficial owners or persons who are essential for the award/implementation of the grant).

Applicants will also be refused if they³⁵:

- have misrepresented the information required as a condition for participating in the procedure or have failed to supply that information; or
- were previously involved in the preparation of documents used in the award procedure where this entails a breach of the principle of equality of treatment, including distortion of competition, that cannot be remedied otherwise.

³⁴ Council Regulation (EC, Euratom) No 2988/95 of 18 December 1995 on the protection of the European Communities financial interests, (OJ L 312, 23.12.1995, p. 1).

³⁵ See Article 143 EU Financial Regulation [2024/2509](#).

D — Award criteria

Award criteria

If admissible and eligible, the proposals will be evaluated and ranked against the following **award criteria**³⁶, depending on the type of action:

	Excellence (The following aspects will be taken into account, to the extent that the proposed work corresponds to the description in the work programme)	Impact	Quality and efficiency of the implementation
Research and innovation actions (RIA) Innovation actions (IA)	<ul style="list-style-type: none"> - Clarity and pertinence of the project’s objectives, and the extent to which the proposed work is ambitious and goes beyond the state of the art. - Soundness of the proposed [for the first stage: overall(*)] methodology, including the underlying concepts, models, assumptions, inter-disciplinary approaches, appropriate consideration of the gender dimension in research and innovation content, and the quality of open science practices, including sharing and management of research outputs and engagement of citizens, civil society 	<ul style="list-style-type: none"> - Credibility of the pathways to achieve the expected outcomes and impacts specified in the work programme, and the likely scale and significance of the contributions from the project. - Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities. 	<ul style="list-style-type: none"> - Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall. - Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise.

³⁶ For two-stage submission procedures, only the aspects in bold are considered for the evaluation of first-stage applications. See “Two-stage calls” below in this General Annex.

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	<p>and end-users where appropriate.</p> <p>(*) Including all aspects mentioned in the first stage proposal template, which also include the integration of the gender dimension in research and innovation content as well as open science practices.</p>		
Coordination and support actions (CSA)	<ul style="list-style-type: none"> - Clarity and pertinence of the project's objectives. - Quality of the proposed coordination and/or support measures, including soundness of methodology. 	<ul style="list-style-type: none"> - Credibility of the pathways to achieve the expected outcomes and impacts specified in the work programme, and the likely scale and significance of the contributions from the project. - Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities. 	<ul style="list-style-type: none"> - Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall. - Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise.
Programme co-fund actions (CoFund)	<ul style="list-style-type: none"> - Clarity and pertinence of the project's objectives, and the extent to which the proposed work is ambitious, and goes beyond the state of the art. - Soundness of the proposed methodology, including the underlying concepts, models, assumptions, inter-disciplinary 	<ul style="list-style-type: none"> - Credibility of the pathways to achieve the expected outcomes and impacts specified in the work programme, and the likely scale and significance of the contributions from the project. - Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and 	<ul style="list-style-type: none"> - Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall. - Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise.

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	approaches, appropriate consideration of the gender dimension in research and innovation content, and the quality of open science practices, including sharing and management of research outputs and engagement of citizens, civil society and end-users where appropriate.	exploitation plan, including communication activities.	
Training and mobility actions (TMA)	<i>See the Marie Skłodowska-Curie Actions Work Programme part 2.</i>		
Pre-commercial procurement actions (PCP) Public procurement of innovative solutions actions (PPI)	<ul style="list-style-type: none"> - Clarity and pertinence of the objectives and the extent to which they are ambitious, and go beyond the state of the art in terms of the degree of innovation that is needed to satisfy the procurement need. - Soundness of the proposed methodology, taking into account the underlying concepts and assumptions. 	<ul style="list-style-type: none"> - Credibility of the pathways to achieve the expected outcomes and impacts specified in the work programme. - Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation* plan, including communication activities. <p style="font-size: small;">* For PCP actions and PPI actions, the exploitation of results by the beneficiaries means primarily the use that is made of the innovative solutions by the procurers/end-users. The manufacturing and sale of the innovative solutions are performed by the suppliers of the solutions, which are not beneficiaries but subcontractors.</p>	<ul style="list-style-type: none"> - Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall. - Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise.

Framework Partnership Agreements (FPA)	<ul style="list-style-type: none">- Clarity and pertinence of the project's objectives.	<ul style="list-style-type: none">- Credibility of the action plan of the FPA to achieve the expected outcomes and impacts specified in the work programme.	<ul style="list-style-type: none">- Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise.- Potential for long-term cooperation among participants.
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Scores and weighting

Evaluation scores will be awarded for the criteria, and not for the different aspects listed in the table. For full applications, each criterion will be scored out of 5. The threshold for individual criteria will be 3. The overall threshold, applying to the sum of the three individual scores, will be 10.

To determine the ranking for 'Innovation actions', the score for 'Impact' will be given a weight of 1.5.

Proposals that pass the individual threshold AND the overall threshold will be considered for funding, within the limits of the available call budget. Other proposals will be rejected.

Two-stage calls

For the evaluation of first-stage applications under a two-stage submission procedure, only the 'Excellence' and 'Impact' criteria will be evaluated. Within these criteria, only the aspects in **bold** will be considered.

The threshold for both individual criteria will be 4. For each indicative budget-split in the call conditions, the overall threshold applying to the sum of the two individual scores will be set at a level that ensures the total requested budget of proposals admitted to stage 2 is as close as possible to two times the available budget, and not less than one and a half times the available budget. The actual level will therefore depend on the volume of proposals received. The threshold is expected normally to be set at 8 or 8.5.

The evaluation procedure is explained further in *Annex F below*.

E — Documents

Submission

All proposals must be submitted **electronically** via the Funders & Tenders Portal electronic submission system (accessible via the topic page in the [Search Funding & Tenders](#) section). Paper submissions are NOT possible.

Proposals must be **complete** and contain all parts and mandatory annexes and supporting documents.

The application form will have two parts:


- **Part A** (to be filled in directly online) contains administrative information about the applicant organisations (future coordinator and beneficiaries and affiliated entities), the summarised budget for the proposal and call-specific questions;
- **Part B** (to be downloaded from the Portal submission system, completed and then assembled and re-uploaded as a PDF in the system) contains the technical description of the project.

Annexes and supporting documents will be directly available in the submission system and must be uploaded as PDF files (or other formats allowed by the system).

Proposals should be designed to stay as close as possible to the award criteria (*see Annex D above*). The application form will help to achieve this.

When submitting the proposal, the coordinator will have to confirm that they have the mandate to act for all applicants. Moreover, they will have to confirm that the information in the application is correct and complete and that all participants comply with the conditions for receiving EU funding (especially eligibility, financial and operational capacity, exclusion, etc.). Proposals not complying with these requirements will be rejected. Before signing the grant, each participant will have to confirm this again by signing a declaration of honour.

For lump sum grant proposals, the estimated budget must be described in a detailed budget table. This will be used as a basis for justifying and/or fixing the lump sum amount. As the lump sum must be an approximation of the costs actually incurred, the costs included in this detailed budget table must comply with the basic eligibility conditions for EU actual cost grants (*see AGA — Annotated Grant Agreement, Article 6*). This is particularly important for purchases and subcontracting, which must ensure best value for money (or, if appropriate, the lowest price) and be free from any conflicts of interest. If the budget table contains ineligible costs, the grant may be reduced (even later on during implementation of the project or after its end). Exceptionally, the Decision authorising the use of lump sum funding for a specific action might specify that a detailed budget table is not required.

 Applicants may be asked at a later stage for further documents (for legal entity validation, financial capacity check, bank account validation, etc.).

F — Procedure

Evaluation procedure and ranking

Calls may be subject to either a **single-stage submission procedure** or a **two-stage submission procedure**. The **evaluation procedure** may be organised in one (standard) or several steps.

In the first stage of a two-stage submission, applicants will be requested to submit only an outline application (which will be evaluated against only two award criteria: ‘Excellence’ and ‘Impact’). Successful applicants will be invited to submit a full application for the second stage (which will be evaluated against the full set of award criteria).

Proposals will be checked for formal requirements (admissibility and eligibility) and then evaluated (for each topic separately) for operational capacity and award criteria (*see Annexes C and D above*) by an **evaluation committee** composed of independent external experts and then ranked according to their quality score.

For lump sum grant proposals, comments on the detailed lump sum budget table will be provided in the Evaluation Summary Report only for proposals invited to grant agreement preparation (or placed in the reserve list) and ones rejected (in part) due to significant overestimation or underestimation of costs.

Exceptionally, where indicated in the specific call/topic conditions, the evaluation committee may be composed partially or, in the case of ‘Coordination and support actions’, partially or fully of representatives of EU institutions.


For proposals with the same score within a single budget envelope (with the exception of the first stage of two-stage submissions) a method to establish the **priority order** will be determined, taking into consideration the objectives of the specific topic. In the absence of special arrangements in the specific call/topic conditions, the following method will apply:


For each group of proposals with the same score, starting with the group achieving the highest score and continuing in descending order:


- 1) Proposals that address aspects of the call that have not otherwise been covered by more highly ranked proposals will be considered to have the highest priority.
- 2) The proposals identified under 1), if any, will themselves be prioritised according to the scores they have been awarded for ‘Excellence’. When these scores are equal, priority will be based on scores for ‘Impact’. In the case of ‘Innovation actions’, priority will be given to the score for ‘Impact’, followed by that for ‘Excellence’.
- 3) If necessary, the gender balance among the researchers with a leading role named in the researchers table in the proposal, will be used as a factor for prioritisation.
- 4) If necessary, any further prioritisation will be based on geographical diversity, defined as the number of Member States or Associated Countries represented in the proposal, not otherwise receiving funds from projects higher up the ranking list (and if equal in number, then by budget).


- 5) If a distinction still cannot be made, the panel may decide to further prioritise by considering other factors related to the objectives of the call, or to Horizon Europe in general. These may include, for example, enhancing the quality of the project portfolio through synergies between projects or, where relevant and feasible, involving SMEs. These factors will be documented in the panel report.
- 6) The method described in 1), 2), 3) and 4) will then be applied to the remaining equally ranked proposals in the group.


At the end of the evaluation, all applicants will be informed of the result in an evaluation result letter. Successful proposals will be invited to the next stage, ‘grant preparation’; the other proposals will be put on the reserve list or rejected.

 **No commitment to provide funding** — Invitation to the grant preparation stage does NOT constitute a formal commitment to funding. Various legal checks are still needed before the grant can be awarded, such as legal entity validation, financial capacity verification, exclusion check, etc.

 If indicated in the specific call/topic conditions, proposals which were judged to deserve funding but did not succeed because of budget limits will receive a **Seal of Excellence**³⁷. With prior authorisation from the applicant, the granting authority may share information concerning the proposal and the evaluation with interested financing authorities, subject to the conclusion of confidentiality agreements.


 **Strategic Technologies for Europe Platform (STEP)**³⁸ — If provided for in the specific call/topic conditions, proposals that have been assessed positively and comply with the minimum quality requirements (including eligibility, exclusion, and award criteria) may be awarded a ‘**STEP Seal**’, if the project contributes to any of the STEP objectives. Information about the project will be, upon consent, displayed in the STEP Portal with the aim of enhancing the visibility of the project, which may help it attract public or private funding by certifying its quality and contribution to the STEP objectives.

 **Budget flexibility** — The budgets set out in the calls and topics are indicative. Unless otherwise stated, final budgets may change following evaluation. The final figures may change by up to 20% compared to the total budget indicated in each individual part of the work programme. Changes within these limits will not be considered substantial within the meaning of Article 110(5) of Regulation (EU, Euratom) No [2024/2509](#).

 **Joint calls for proposals** — In cases of applications for **joint calls** with third countries (including scientific and technological organisations or agencies from third countries), international organisations or non-profit legal entities, the joint selection and evaluation procedures will be indicated in the specific call/topic conditions.

³⁷ https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/seal-excellence_en.

³⁸ Regulation (EU) 2024/795 of the European Parliament and of the Council of 29 February 2024 establishing the Strategic Technologies for Europe Platform (STEP) (OJ L, 2024/795, 29.2.2024).

 **Blind evaluation pilot** – If indicated in the specific call/topic conditions, first-stage proposals of two-stage submissions will be evaluated blindly³⁹ and applicants must not disclose their identity in the proposal abstract and Part B of their proposal (*see Annex A above*).

Evaluation review procedure

If the consortium believes that the evaluation procedure was flawed, the coordinator can submit a **complaint** (following the deadlines and procedures also set out in the evaluation result letter).

Only the procedural aspects of an evaluation may be the subject of a request for an evaluation review. The evaluation of the merits of a proposal will not be the subject of an evaluation review.

A request for an evaluation review must relate to a specific proposal and must be submitted within 30 days after the beneficiary accesses the evaluation results. The deadlines will be counted from the date of opening/access. The maximum size limit of the request is 7 000 characters. Notifications of evaluation results which have not been opened in the Funding & Tenders Portal within 10 days after sending are considered to have been accessed (*see also [Funding & Tenders Portal Terms and Conditions](#)*).

An evaluation review committee will provide an opinion on the procedural aspects of the evaluation. The evaluation review committee may recommend a re-evaluation of the proposal, to be carried out primarily by evaluators who were not involved in the previous evaluation, or a confirmation of the initial evaluation.

Indicative timetable for evaluation and for signature of the grant agreement

Unless otherwise stated in the specific call/topic conditions, the timing for evaluation and grant preparation is as follows:

- information on the outcome of the evaluation: around 5 months from the deadline for submission;
- indicative date for the signing of grant agreements: around 8 months from the deadline for submission.

For two-stage calls, the timing is different (for the evaluation result: around 3 months from the deadline for submission for the first stage, and around 5 months from the deadline for submission for the second stage, for signature of the grant agreement around 8 months from the second stage deadline for submission).

G — Legal and financial set-up of the grant agreements

During the grant preparation stage, the consortium will be asked to prepare the [grant agreement](#), together with the EU project officer.

This grant agreement will set out the framework for the grant and its terms and conditions, particularly concerning deliverables, reporting and payments. The applicable model with the complete text of the provisions is available on the topic page, together with the other call documentation.

Starting date & project duration

The project starting date and duration will be fixed in the grant agreement (*see Data Sheet, point 1*). Normally, the starting date will be after the grant has been signed. A starting date before the date the grant is signed (retroactive) can be granted exceptionally for duly justified reasons, if agreed with the granting authority⁴⁰.

The project duration is provided in months (extensions will be possible only exceptionally, for duly justified reasons and if the granting authority agrees).

Milestones and deliverables

The milestones and deliverables for each project will be managed through the grant management system in the Portal and are reflected in Annex 1 of the grant agreement.

The standard deliverables will be set out in the specific call/topic conditions.

Form of grant, funding rate and maximum grant amount

The grant parameters (maximum grant amount, funding rate, total eligible costs, etc.) will be fixed in the grant agreement (*Data Sheet, point 3 and Article 5*).

The project budget is provided in EUR. The amount of the grant awarded may be lower than the amount requested.

For **actual cost grants**, the grant will be a budget-based, mixed actual cost grant. This means that it will reimburse **ONLY** certain types of costs (eligible costs) and **ONLY** those costs *actually* incurred for the project (NOT the *budgeted* costs).

The costs will be reimbursed at the funding rate fixed in the specific call/topic conditions and in the grant agreement.

Such grants may NOT produce a profit. If there is a profit (i.e. surplus of revenues + EU grant over costs), it will be deducted from the final grant amount.

Moreover, the final grant amount may be reduced in case of non-compliance (e.g. improper implementation, breach of obligations, etc.).

⁴⁰ See Article 196 EU Financial Regulation [2024/2509](#).

The maximum Horizon Europe funding rates are as follows:

- Research and innovation action: 100%
- Innovation action: 70% (except for non-profit legal entities, where a rate of up to 100% applies)
- Coordination and support action: 100%
- Programme co-fund action: between 30% and 70%
- Innovation and market deployment: 70% (except for non-profit legal entities, where a rate of up to 100% applies)
- Training and mobility action: 100%
- Pre-commercial procurement action: 100%
- Public procurement of innovative solutions action: 50%

Other funding rates may be set out in the specific call/topic conditions.

For **lump sum and unit grants**, the funding rate is already applied as part of the methodology for fixing the amounts and is therefore not shown in the grant agreement.

Budget categories and cost eligibility rules

The budget categories and cost eligibility rules are fixed in the grant agreement (*see Data Sheet, point 3 and Article 6*).

Budget categories:

- actual costs (i.e. costs which are real and not estimated or budgeted) for:
 - personnel costs (unless declared as a unit cost; see below);
 - subcontracting costs;
 - purchase costs (unless declared as a unit cost; see below); and
 - costs of providing financial support to third parties (if provided for in the specific call conditions);
- units (i.e. an amount per unit) for:
 - personnel unit costs
 - personnel costs of SME owners/natural persons not receiving a salary;
 - personnel costs calculated by the beneficiaries according to their usual cost accounting practices (average personnel costs);

- costs of internally invoiced goods and services calculated by the beneficiaries according to their usual cost accounting practices; and
- specific unit costs (if provided for in the specific call/topic conditions; see also Annex 2a of the grant agreement);
- flat-rate (i.e. costs calculated by applying a percentage fixed in advance to other types of eligible costs) for:
 - indirect costs (25% flat-rate of the total eligible direct costs, excluding eligible direct costs for subcontracting, financial support to third parties and any unit costs or lump sums which include indirect costs);
- lump sum (i.e. a global amount deemed to cover all costs of the action or a specific category of costs, if provided for in the specific call/topic conditions).

Within a grant, different forms of costs can be used.

Costs can also be declared under several EU Synergy grants, if the cumulative funding under the grants does not exceed 100% of the eligible costs and the contributions declared to them.

Reporting & payment arrangements

The reporting and payment arrangements are fixed in the grant agreement (*Data Sheet, point 4 and articles 21 and 22*).

After the grant has been signed, the consortium will normally receive a float to start working on the project (normally, pre-financing of 160% of the average EU funding per reporting period (i.e. maximum grant amount/number of periods); exceptionally, less or no pre-financing). For actions with only one reporting period, it will be less, since 100% would mean the totality of the grant amount.

Programme co-fund actions may receive additional pre-financing payments.

Payments will be automatically lowered if one of the consortium members has outstanding debts towards the EU (granting authority or other EU bodies). Such debts will be offset by the granting authority, in line with the conditions set out in the grant agreement (*see Article 22*).

At the moment of the prefinancing payment, an amount ranging from 5% to 8% of the maximum grant amount will be deducted from the prefinancing payment and transferred to the mutual insurance mechanism. This mechanism covers the risks associated with non-recovery of sums due from the beneficiaries.

There will be one or several interim payments linked to a periodic report, depending on the duration of the project.

At the end of the project, the consortium will be invited to submit a report on the basis of which the final grant amount will be calculated. If the total of earlier payments is higher than the final grant amount, the beneficiaries concerned (or the coordinator) will be asked to pay back the difference (recovery).

Certificates

Depending on the size of the grant amount and on the type of beneficiaries, beneficiaries may be required to submit a certificate on the financial statements. The thresholds for this certificate are fixed in the grant agreement (*Data Sheet, point 4 and Article 24*).

Liability regime for recoveries

The liability regime for recoveries is that of individual financial responsibility. Each beneficiary is liable only for their own debt (and those of its affiliated entities, if any) (*Data Sheet point 4.4 and Article 22*).

Provisions concerning project implementation

- Proper implementation of the action (*Article 11*).
- Conflict of interest (*Article 12*).
- Confidentiality and security (EU classified information) (*Article 13 and Annex 5*).
- Ethics (research integrity) and values (gender mainstreaming) (*Article 14 and Annex 5*).
- Data protection (*Article 15*).
- Intellectual Property Rights (IPR), background and results, access rights and rights of use (*Article 16 and Annex 5*).

In addition to the standard provisions, the following specific provisions in the model grant agreement will apply to all grants awarded under this work programme:

Additional exploitation obligations in case of a public emergency: If requested by the granting authority, beneficiaries must grant non-exclusive licences to their results – for a limited period of time specified in the request and on fair and reasonable conditions – to legal entities that need the results to address the public emergency. These legal entities must commit to rapidly and broadly exploiting the resulting products and services on fair and reasonable conditions. This provision will apply up to 4 years after the end of the action.

Additional information obligation relating to standards: Unless stated otherwise in the specific call conditions, beneficiaries must, up to 4 years after the end of the action, inform the granting authority if the results could reasonably be expected to contribute to European or international standards.

Where provided for in the specific call conditions, the granting authority may, up to 4 years after the end of the action, object to a transfer of ownership or to the exclusive licensing of results, as set out in the specific provision of Annex 5.

- Communication, dissemination, open science and visibility (*Article 17 and Annex 5*). In addition to the standard provisions, the following specific provisions in the model grant agreement will apply to all grants awarded under this work programme:

Open science - additional practices, validation of scientific publications:

Beneficiaries must provide (digital or physical) access to data or other results needed to validate the conclusions of scientific publications, to the extent that their legitimate interests or constraints are safeguarded (and unless they already provided the (open) access at publication).

Open science - additional practices, public emergency: In case of a public emergency, if requested by the granting authority, beneficiaries must immediately deposit any research output in a repository and provide open access to it under a CC BY licence, a public domain dedication (CC 0) or equivalent.

As an exception, if providing open access would be against the beneficiaries' legitimate interests, the beneficiaries must grant non-exclusive licences, on fair and reasonable conditions, to legal entities that need the research output to address the public emergency. These legal entities must commit to rapidly and broadly exploiting the resulting products and services on fair and reasonable conditions. This exception is limited to 4 years after the end of the action.

- Specific rules for carrying out the action (*Article 18 and Annex 5*).

Other provisions may be set out in the specific call/topic conditions.

Non-compliance and breach of contract

The grant agreement (*Chapter 5*) provides for the measures that may be taken in case of breach of contract (and other violations of law).

 For more information, see the [AGA — Annotated Grant Agreement](#).



IMPORTANT

- **Do not wait until the end** — Complete the application sufficiently in advance of the deadline to avoid any last minute **technical problems**. Problems due to last-minute submissions (*e.g. congestion, etc.*) will be entirely at applicants' own risk. Call deadlines can NOT be extended at the request of applicants.
- **Consult** the topic page on the Portal regularly. The granting authority will use it to publish updates and additional information on the call (call updates).
- **Funding & Tenders Portal electronic exchange system** — By submitting the application, all applicants **accept** to use the electronic exchange system in accordance with the [Portal Terms & Conditions](#).
- **Registration** — Before submitting the application, all beneficiaries, affiliated entities and associated partners must be registered in the [Participant Register](#). The participant identification code (PIC) (one per participant) is mandatory for the application form. For validation, beneficiaries and affiliated entities will be requested to upload the necessary documents showing their legal status and origin during the grant preparation stage. Associated partners do not need validation.
- **Consortium roles** — When setting up the consortium, applicants should think of organisations that can help them reach objectives and solve problems.

The roles should be attributed according to the degree of participation of each participant in the project. Main participants should participate as beneficiaries or affiliated entities; other entities may participate as associated partners, subcontractors, or third parties giving in-kind contributions, provided that the related conditions are fulfilled. Associated partners and third parties giving in-kind contributions should bear their own costs (they will not become formal recipients of EU funding). Subcontracting should normally constitute a limited part and must be performed by third parties (not by one of the beneficiaries/affiliated entities, *see section G*).

- **Coordinator** — In multi-beneficiary grants, the beneficiaries participate as a consortium (group of beneficiaries). They will have to choose a coordinator among them, who will manage and coordinate the project and will represent the consortium towards the granting authority. In mono-beneficiary grants, the single beneficiary will automatically be the coordinator.
- **Affiliated entities** — Applicants may participate with affiliated entities. Affiliated entities will get a part of the EU funding and must therefore comply with all the call conditions (just like beneficiaries). But they do not sign the grant agreement and do not count towards the minimum eligibility criteria for consortium composition (if any).
- **Associated partners** — Applicants may participate with associated partners. They participate without funding and without signing the grant agreement and therefore do not need to be validated.
- **Consortium agreement** — For practical and legal reasons, participants must conclude a written consortium agreement to ensure the smooth and successful implementation of the action and to deal with exceptional or unforeseen circumstances, unless otherwise provided for in the specific call conditions. The consortium agreement also gives the possibility to redistribute the EU funding according to internal consortium principles and arrangements (for instance, one beneficiary can reattribute their grant share to another beneficiary). The consortium agreement thus allows the grant to be customised to the needs of the consortium and can also help to protect the members in case of disputes. Consortium agreements are not required for mono-beneficiary projects.
- **Completed/ongoing projects** — Applications for projects that have already been completed will be rejected. Applications for projects that have already started will be assessed on a case-by-case basis (in such cases, no costs can normally be reimbursed for activities that took place before the application was submitted).

Horizon Europe - Work programme 2025
General Annexes

- **No-profit rule** — Grants may NOT give a profit (i.e. surplus of revenues + EU grant over costs). This will be checked by the granting authority at the end of the project.
 - **No double funding** — There is strict prohibition of double funding from the EU budget. Any given action may receive only ONE grant from the EU budget (except for EU Synergy grants) and same costs may under NO circumstances be declared to two different EU actions.
 - **Combination with EU operating grants** — Combination with EU operating grants is possible, if the project remains outside the operating grant work programme and the beneficiary makes sure that cost items are clearly separated in its accounting and NOT declared twice (see [AGA — Annotated Model Grant Agreement, Article 6.2.E](#)).
 - **Multiple applications** — Applicants may submit more than one application for *different* projects under the same call (and be awarded funding for them).
Organisations may participate in several applications.
BUT: if there are several applications for the *same/very similar* project, only one application will be accepted and evaluated.
 - **Language** — Applicants can submit their application in any official EU language. However, for reasons of efficiency, it is strongly advised to use English. If applicants need the call documentation in another official EU language, they must submit a request within 10 days after publication of the call (for the contact information, see *topic page*).
 - **Rejection** — By submitting the application, all applicants accept the general call conditions set out in the General Annexes and the specific call conditions set out in the topics. Applications that do not comply with all the call conditions will be **rejected**. This applies also to applicants: all applicants need to fulfil the criteria; if any one of them does not, they must be replaced or the entire application will be rejected.
 - **Cancellation** — There may be circumstances which may require the cancellation of the call or topic. In this case, applicants will be informed via a call or topic update. Cancellations are without entitlement to compensation.
 - **Transparency** — In accordance with Article 38 of the [EU Financial Regulation 2024/2509](#), information about EU grants awarded is published each year on the [Europa website](#).
This includes:
 - beneficiaries' names;
 - beneficiaries' addresses;
 - the purpose for which the grant was awarded;
 - the maximum amount awarded.
- Publication can exceptionally be waived (following a reasoned and duly substantiated request), if there is a risk that disclosure could jeopardise applicants' rights and freedoms under the EU Charter of Fundamental Rights or harm its commercial interests.
- **Data protection** — The submission of an application under this call involves the collection, use and processing of personal data. This data will be processed in accordance with Regulation [2018/1725](#). It will be processed solely for the purpose of evaluating the application (and subsequent management of the grant and, if needed, programme monitoring, evaluation and communication). Details are explained in the Funding & Tenders Portal privacy statement.

SPECIFIC CONDITIONS FOR ACTIONS WITH PCP/PPI

H — Specific conditions for actions implementing pre-commercial procurement or procurement of innovative solutions

This Annex applies to all types of actions implementing pre-commercial procurement (PCP) and procurement of innovative solutions (PPI). It applies to both PCP/PPI actions and other types of actions which prepare and/or execute a PCP or PPI, for instance through subcontracting activities.

Requirements for all types of actions supporting PCP or PPI

The PCP/PPI must be prepared and executed by one of the following:

- by one or more public procurer(s), plus possibly one or more private and/or NGO procurer(s) that provide similar services of public interest, that is (are) responsible for the acquisition and/or regulatory strategy of the relevant innovative solutions and aim to obtain ambitious quality and efficiency improvements in the area of the PCP/PPI; or
- by entities with a mandate from one or more of these procurers to act on their behalf in the procurement (e.g. central purchasing bodies).

Other entities (e.g. end-users) that do not have a conflict of interest with the PCP/PPI, and whose participation in the action is well justified, may participate in ‘additional activities’ to prepare, manage and follow-up the PCP/PPI and embed it into a wider set of demand-side activities. This includes disseminating results, removing obstacles to introducing the solutions onto the market (e.g. contributing to standardisation, regulation and certification), awareness raising, experience sharing/training, and preparing further cooperation among stakeholders and procurers for future PCP or PPI.

For PCP executed by a group of procurers, the buyers’ group must jointly prepare and implement the pre-commercial procurement so that there is one joint call for tender, one joint evaluation of offers, and a lead procurer⁴¹ awarding the research and development (R&D) service contracts in the name and on behalf of the buyers’ group. The PCP must address one concrete procurement need identified as a common challenge⁴², which requires new R&D and is described in the common specifications of the joint PCP call for tender. Each procurer in the buyers’ group must contribute financially to the total budget necessary to jointly finance the PCP, enabling the procurers to share the costs of procuring R&D services from a number of providers and comparing the merits of the alternative solutions pursued by these competing providers to address the common challenge.

⁴¹ The ‘lead procurer’ is a public procurer and is the beneficiary appointed by the buyers’ group to coordinate and lead the procurement activities. They can be either one of the procurers in the buyers’ group or another beneficiary in the action who is established or designated by the procurers in the buyers’ group to act as lead procurer.

⁴² Addressing the common challenge in different countries may require, beyond the common core functionality, the development and testing of additional local functionality or adaption of solutions by each procurer due to differences in the local context. A PCP that addresses a challenge consisting of several facets (sub-challenges or building blocks) is considered one joint PCP, as long as all procurers in the buyers’ group share the need for - and are willing to co-finance - all the facets of the common challenge.

For PPI executed by a group of procurers, the lead procurer must coordinate the preparation and implementation of one joint or several coordinated public procurements of innovative solutions, based on common specifications defined jointly by the buyers' group. Each PPI must focus on one concrete need identified as a common challenge that requires the deployment of innovative solutions⁴³.

Projects that aim to implement a PCP/PPI must contain a preparation and execution stage.

Preparation stage

The expected outcomes for the preparation stage, to be included as deliverables/milestones, are:

- a prior information notice for the open market consultation: 5 days before submission for publication to the OJEU, i.e. a minimum of 50 days before the start of the first meeting;
- a report on the result of the open market consultation, prior market analysis and its impact on the tender documents; in addition, for PPI, feedback from activities to verify market readiness before deployment (e.g. conformance testing, certification, quality labelling);
- completed tender documents based on the Horizon Europe PCP/PPI model contract documents, including the contract notice: 30 days before its submission to the OJEU;
- for PCP/PPI executed by a group of procurers: the signed joint procurement agreement confirming the final means of cooperation, including the financial commitment of the buyers' group for the PCP/PPI, and final confirmation of the lead procurer.

Execution stage

The expected outcome of the execution stage is the implementation of the procurement procedure and of the PCP/PPI contracts. For PCP, this includes validating and comparing the performance of the competing PCP solutions to verify if they can be converted into permanent service. For PPI, this includes deploying the innovative solutions and evaluating the results in real-life operating conditions, with a duration that allows for appropriate evaluation of the potential impact of these solutions if converted into permanent service.

Deliverables/milestones to be included in the description of work for the execution stage are:

- a copy of the contract award notice published in TED: 48 days after the award of contracts;
- at the end of the tender evaluation (for PCP, also after the evaluations of each phase):
 - information on the total number of bids received, particularly the data on the winning tenderer(s) and abstracts of the winning tenders for publication and evaluation purposes;
 - final ranking list of the selected projects, final scores and qualitative assessment per criterion for each bid received, along with minutes of the evaluation meeting;

⁴³ Addressing the common challenge in different countries may require deployment and, where applicable, conformance testing, of local functionality or adaption of solutions for each procurer due to differences in the local context.

- for PCP: assessing the results achieved by each tenderer in the previous phase;
- at the end of the action, give a demonstration to the granting authority:
 - for PCP: of the tested solutions resulting from the PCP;
 - for PPI: of the deployed innovative solution(s).

Where the WTO Government Procurement Agreement (GPA) does not apply, participation in tendering procedures must be open on equal terms to bidders from EU Member States and all countries with which the EU has an agreement in the field of public procurement under the conditions laid down in that agreement, including all Horizon Europe Associated Countries. Where the WTO GPA applies, tendering procedures must also be open to bidders from states that have ratified this agreement, under the conditions laid down therein.

If the specific call conditions restrict participation or control for security reasons, participation in the PCP/PPI procedure must also be limited to bidders meeting this restriction. If the specific conditions for the topic impose a place of performance obligation, the place of performance of the contract must comply with this obligation.

Specific requirements for pre-commercial procurement (PCP)

The following requirements apply to ensure that the provisions for PCP in the Horizon Europe rules for participation, the conditions for the R&D services exemption of the EU Directives on public procurement⁴⁴, the EU Treaty principles⁴⁵ and the competition rules⁴⁶ are fully respected.

Definitions

PCP must comply with the Horizon Europe definition: ‘*Pre-commercial procurement*’ means procurement of R&D services involving risk-benefit sharing under market conditions and competitive development in phases, where there is a clear separation between the procurement of the R&D services procured from the deployment of commercial volumes of end-products⁴⁷.

‘*Risk-benefit sharing under market conditions*’ refers to the PCP approach in which procurers share with suppliers at market price the risks and benefits related to the intellectual property rights (IPR) resulting from the R&D.

‘*Competitive development in phases*’ refers to buying the R&D from several competing R&D providers in parallel and to comparing and identifying the best-value-for-money solutions on the market to address the PCP challenge. To reduce the investment risk for the procurer, reward the most competitive solutions and facilitate the participation of smaller innovative companies, the R&D is also split into phases (solution design, prototyping, original development and

⁴⁴ See Article 14 of Directive 2014/24/EU, Article 32 of Directive 2014/25/EU and Article 13(f)(j) of Directive 2009/81/EC.

⁴⁵ In particular, the fundamental Treaty principles on the free movement of goods and workers, the freedom to provide services, the freedom of establishment and the free movement of capital, as well as the principles deriving therefrom, such as the principles of non-discrimination, transparency and equal treatment.

⁴⁶ See, in particular, Article 2.3 of the 2014 R&D&I State aid framework.

⁴⁷ See the Horizon Europe Regulation and the PCP Communication COM/2007/799 and associated SEC(1668)2007. Note that PCPs can include the purchase of the first end-products that were developed, installed and tested during the PCP, but not the purchase of larger commercial volumes of end-products requiring quantity production beyond delivering the first products for the PCP.

validation/testing of the first products), with the number of competing R&D providers being reduced after each phase.

‘Separation from the deployment of commercial volumes of end-products’ refers to the complementarity of PCP, which focuses on the R&D phase before wide commercialisation, and PPI, which does not focus on R&D but on wide commercialisation/diffusion of solutions. Procurers can, but are not obliged, to procure R&D results from a PCP.

Preparation and publication of the open market consultation and call for tender

To prepare the call for tender, an open market consultation⁴⁸ with potential tenderers and end-users must be held to broach the views of the market on the intended scope of the R&D. The results of this open market consultation must be taken into account to fine-tune the tender specifications, so that the gap between state-of-the-art industry development and the procurement needs justifies the procuring of R&D⁴⁹ services.

The PCP contract notice must be published EU-wide⁵⁰ in at least English. Offers must be accepted and communication with stakeholders must be enabled at all stages in at least English. All offers must be evaluated according to the same objective criteria, regardless of the geographical location, size of organisation or governance structure of the tenderers.

The prior information notice for the open market consultation and the contract notice must be advertised widely, using in particular Horizon Europe internet sites and national contact points. The Commission must be informed at least 5 days before the expected date of publication of the prior information notice for the open market consultation and 30 days before the expected date of publication of the PCP contract notice. The PCP call for tenders must remain open for at least 60 days.

Tender documentation, procurement and implementation of the contract

The PCP contract that will be concluded with each selected tenderer must take the form of one single framework agreement covering all PCP phases, without contract renegotiations after the award. This framework agreement must contain information on the procedures for implementing the different phases (through specific contracts), including the format of the intermediate evaluations (including evaluation criteria and weightings) for each phase.

⁴⁸ The open market consultation should be organised in a way not to preclude or distort competition. In respect of the Treaty principles, the open market consultation must be announced well in advance and widely - via a prior information notice that is published at least 45 days before the first open market consultation meeting in the Official Journal of the EU - and enable potential tenderers regardless of their geographic location to participate at least in English. All information given in answers to questions from participants in the dialogue should be documented and published.

⁴⁹ In line with WTO GPA 2014 Article XIII(1)(f), R&D can cover activities such as solution exploration and design, prototyping, up to the original development of a limited volume of first products or services in the form of a test series. Original development of a first product or service may include limited production or supply to incorporate the results of field testing and demonstrate that the product or service is suitable for production or supply in quantity to acceptable quality standards. R&D does not include quantity production or supply to establish commercial viability or to recover R&D costs, nor commercial development activities such as incremental adaptations or routine or periodic changes to existing products, services, production lines, processes or other operations in progress, even if such changes may represent improvements.

⁵⁰ Through the Official Journal of the EU, using the TED (Tenders Electronic Daily) web portal.

For PCP executed by a group of procurers, the R&D service contracts are awarded by the lead procurer and all selected tenderers can be paid by the lead procurer, or pro rata by each procurer in the buyers' group according to their share in the total PCP budget.

The PCP contract notice must contain information on the intended number of R&D providers that will be selected (minimum of three providers) to start the PCP, the number of PCP phases and the expected duration and budget for each PCP phase. The PCP must cover the full PCP life cycle of solution design, prototyping, and original development, including installation and testing of a limited volume of test series products/services in the procurer's/end-user's premises. Each of the three PCP phases can be split up into further phases if appropriate.

The following simplified and/or accelerated PCP procedures may be used: for PCP that require fast deployment⁵¹, one specific contract may cover both the second and third PCP phase; if fewer than two tenderers are capable of performing the R&D services in the EU Member States or Associated Countries (for security contracts, this may be restricted to the Member States), the phase 1 contracts may be awarded to a minimum of two tenderers.

Procurers must avoid the use of selection criteria based on disproportionate qualification and financial guarantee requirements (e.g. with regard to prior customer references and minimum turnover). Functional/performance-based specifications must be used to formulate the object of the PCP call for tender as a problem to be solved, without prescribing a specific approach to be followed. Evaluation of the tenders must be based on best-value-for-money criteria, not just lowest price.

The PCP process must be organised to avoid any conflicts of interest, including in the use of external experts. Providers cannot be beneficiaries in an action during which the PCP is planned or undertaken.

The PCP process must require selected providers to locate the majority of the R&D activities, including the principal researcher(s) working for the PCP contract in particular, in the Member States or Associated Countries⁵².

The PCP procurers must not reserve the R&D results exclusively for their own use. The providers generating results must own the attached IPR, and the procurers must enjoy at least royalty-free access rights to use the R&D results for their own use. The procurers must also enjoy the right to grant (or to require the granting of) non-exclusive licences to third parties, to exploit the results under fair and reasonable market conditions, without any right to sublicense. A call-back provision must ensure that, in case the providers fail to commercially exploit the results within a given period after the PCP, or use the results to the detriment of the public interest, including security interests, the procurers can require transfer of the ownership of the results.

The procurers must inform tenderers of the right to publish public summaries of the results of the PCP project, including information about key R&D results attained and lessons learnt (e.g.

⁵¹ Especially where a budgetary commitment for deployment is already available at the start of the PCP (fast-track PCP).

⁵² For duly justified reasons of public security, this may be limited to the EU Member States.

on the feasibility of the solution approaches to meet the requirements and lessons learnt for potential future deployment of solutions). Details that would be contrary to the public interest, would harm legitimate business interests (e.g. regarding IPR-protected specificities of their individual approaches to solutions) or could distort fair competition may not be disclosed.

To enable the procurers to establish the correct (best value for money) market price for the R&D service, in which case the presence of State aid can in principle be excluded, the PCP call for tender must be carried out in a competitive and transparent way in line with Treaty principles. In addition, the distribution of rights and obligations between procurers and providers (including the allocation of IPR) must be published in the PCP call for tender documents, to obtain a price according to market conditions (and rule out State aid). PCP contracts with providers must contain financial compensation according to market conditions⁵³, compared to the exclusive development price, for assigning IPR to the providers.

Specific requirements for public procurement of innovative solutions (PPI)

Definition

PPI must comply with the relevant Horizon Europe definitions.

'Public procurement of innovative solutions (PPI)' means procurement where contracting authorities act as a launch customer for innovative goods or services which are not yet available on a large-scale commercial basis, and may include conformity testing.

'Launch customers', also called early adopters, refer to the first 20% of customers on the EU's internal market that buy innovative solutions. The solutions have to be new to the procurers in the project, the procurers' market segment or new to the EU's internal market, and relevant to procurers in other Member States and/or Associated Countries.

'Innovative solutions' are new or significantly improved products, services or processes that have already been (partially) demonstrated on a small scale, and may be nearly or already available in small quantities on the market, but which have not been widely adopted yet. Typically, owing to the residual risk of market uncertainty, they have not been produced at a large enough scale to meet mass market price/quality requirements. This also includes existing solutions that are to be utilised in a new and innovative way; PPI does not include the procurement of R&D.

Preparation and publication of the open market consultation and call for tender

Unless the PPI is undertaken as a follow-up to an FP7, Horizon 2020 or Horizon Europe PCP⁵⁴, or unless the situation is a low-value PPI below national procurement thresholds, the following obligations apply:

⁵³ The market price should reflect the benefits allocated to the R&D provider (e.g. commercialisation opportunities opened up by the IPR) and the risks assumed by the R&D provider (e.g. the cost of maintaining the IPR and commercialising the products).

⁵⁴ In the case of a PPI following a PCP that was implemented according to the conditions described in Annex I, the negotiated procedure without publication foreseen in the EU public procurement directives can then be used

- To prepare the call for tenders, an open market consultation with potential tenderers and end-users must be held to inform the market well in advance of the upcoming PPI and broach the views of the market on the PPI's intended scope. Information retrieved from this consultation about the gap between perceived procurement needs and on-going industry developments must be taken into account in the PPI tender specifications, so that the PPI duly focuses on 'early adoption' of 'innovative' solutions.
- The market must be informed well in advance⁵⁵ of the target date for publishing the PPI call for tenders. Market readiness prior to deployment can be verified through the organisation of e.g. conformity testing, certification or quality labelling of solutions.
- The PPI contract notices must be published EU-wide in at least English, offers must be accepted and communication with stakeholders must be enabled at all stages in at least English. All offers must be evaluated according to the same objective criteria, regardless of the geographical location, size of organisation or governance structure of the tenderers.
- The prior information notices for the open market consultation, early announcements of the expected publication date of the PPI call for tender, and the PPI contract notice must be promoted and advertised widely, using Horizon Europe internet sites and national contact points in particular. The Commission must be informed at least 5 days before the expected date of publication of the PIN for the open market consultation and 30 days before the expected date of publication of the PPI contract notice. The PPI call for tenders must remain open for at least 60 days.

Tender documentation, procurement and implementation of the contract

Procurement procedures covered by the EU public procurement directives that do not involve procurement of R&D can be used. Restricted procedures with shortened timeframes for the submission of offers for reasons of urgency must not be used. Framework contracts/agreements with lots can be used.

For PPI implemented by a group of procurers, the specific contracts for procuring specific quantities of goods/services for each procurer can be awarded and the selected tenderers can either all be paid by the lead procurer, or by each procurer in the buyers' group individually, for their quantity of goods/services procured.

Procurers must avoid the use of selection criteria based on disproportionate qualification and financial guarantee requirements (e.g. with regard to prior customer references and minimum turnover). Functional/performance-based specifications must be used to formulate the object of the PPI call for tenders as a problem to be solved, without prescribing a specific approach to be followed. Evaluation of the tenders must be based on best-value-for-money criteria, not just lowest price.

(Article 32(3)(a) of Directive 2014/24/EU, Article 50(b) of Directive 2014/25/EU and Article 13(j) of Directive 2009/81/EC). At least three offers must be requested, including from the R&D providers that successfully completed the preceding PCP.

⁵⁵ By means of a prior information notice in the Official Journal of the EU.

Procurers must organise their procurement to avoid any conflicts of interest, including in the use of external experts. Potential providers cannot be beneficiaries in an action during which the PPI is planned or undertaken.

To encourage fair and wide exploitation of results, ownership of IPR rights should be assigned to the party generating the IPR, except in duly justified cases (e.g. when that party is not able to exploit them).

The PPI call for tender must be carried out in a competitive and transparent way in line with Treaty principles. The distribution of rights and obligations between procurers and providers (including the allocation of IPR) must be published in the PPI call for tender documents, to obtain a price according to market conditions (and rule out State aid).

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Horizon Europe

Work Programme 2023-2025

2. Marie Skłodowska-Curie Actions

IMPORTANT NOTICE:

This amended draft has not been adopted or endorsed by the European Commission. Any views expressed are the views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

This amended draft is made public before the adoption of the amended work programme to provide potential participants with the currently expected main lines of this amended work programme. Only the adopted amended work programme will have legal value.

The adoption of the amended work programme will be announced on the Horizon Europe website and on the Funding and Tenders Portal.

Information and topic descriptions indicated in this amended draft may not appear in the final amended work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

The Commission expressly disclaims liability for any future changes of the content of this document.

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Introduction

The European Union needs a strong, resilient, flexible and creative human resource base, with the right combination of skills to match the future needs of the labour market, to innovate and to convert knowledge and ideas into products and services for economic and social benefit. The Covid-19 crisis has highlighted once more the importance of the Union's reliance on a **highly skilled research-based human capital** that is able to detect and tackle upcoming challenges, to communicate scientific evidence to policy-makers and the public at large, and to work across disciplines.

In this context, the Union must reinforce its efforts to encourage more young women and men to make a career in research, promote its attractiveness for top talents from around the world, retain its own researchers and reintegrate those working elsewhere. The Marie Skłodowska-Curie Actions (MSCA) are the main instrument at Union-level to do so. Since their launch in 1996, they have become the **Union's reference programme for doctoral education and postdoctoral training**. Between 2014 and 2020, in the context of Horizon 2020, the MSCA have supported 65 000 researchers in Europe and beyond, both doctoral candidates and more experienced researchers, and have funded over **1 000 excellent international doctoral networks**.

The MSCA strongly contribute to excellent research, boosting jobs, growth and investment by equipping researchers with **new knowledge and skills, including transferable ones**¹ and providing them with **an international as well as inter-sectoral exposure** (including through academia-business collaboration), to fill the top positions of tomorrow.

The MSCA do not only have a positive impact on individual researchers, they also contribute to the development of **excellent doctoral programmes, postdoctoral training programmes and collaborative research projects**. They have a **structuring impact** on higher education institutions and other entities way beyond academia by widely spreading excellence and setting standards for high-quality researcher education and training, not only across the European Research Area (ERA), but also worldwide. Positive structuring effects on organisations include:

- increasing the quality of researchers' training and supervision offered;
- strengthening research capacity (e.g. ability to attract funding);
- improving human resources practices and procedures, and providing fairer and more attractive working conditions for researchers, including through career guidance and development;

¹ As an illustration, Eurodoc published a list of such transferable skills at: <http://eurodoc.net/skills-report-2018.pdf>; see also the European Competence Framework for Researchers, ResearchComp at: ec_rtd_research-competence-presentation.pdf (europa.eu)

- building new and sustainable international and inter-sectoral partnerships and networks; better transfer of knowledge between sectors and disciplines, enhancing their global reputation and visibility.

Main principles applying to the MSCA

Excellence

The MSCA focus on **excellence** in various aspects: excellence does not only apply to the individual fellows supported or the collaborations fostered and knowledge transferred, but also to the R&I methodologies applied, the research conducted as well as the training, supervision and career guidance provided. Long-term investment in people pays off, as indicated *inter alia* by the number of Nobel Prize winners who have been either former MSCA fellows or supervisors.

Mobility

The MSCA are based on the principle of **physical mobility**: researchers who receive funding have to move from one country to another to acquire new knowledge, skills and competences, and develop their research career. Researchers are also strongly encouraged to move between sectors and disciplines.

While **virtual mobility** does not have the same multifaceted impact on the development of individuals and sustainable cooperation among organisations as physical mobility, it can however complement it, facilitate long-distance collaboration and be an effective means to faster achieving research and training objectives. In this regard, all MSCA proposals are encouraged to explore opportunities offered by e-infrastructures and related services, in particular those provided through GEANT², the pan-European research and education network.

Bottom-up and open to the world

The MSCA are **open to all domains** of research and innovation, chosen freely by the applicants in a fully bottom-up manner, addressed under the Treaty on the Functioning of the European Union. In addition, Postdoctoral Fellowships can also address domains covered by the Treaty establishing the European Atomic Energy Community (Euratom Research and Training Programme 2021-2025). All MSCA will complement top-down collaborative research activities, notably contributing to the EU Missions.

The MSCA have also a **strong international dimension**: international cooperation is particularly encouraged as it allows institutions to set-up strategic collaborations worldwide, attracts foreign talents to Europe and provides European researchers with access to unique expertise, facilities, testing environments or data available only outside Europe.

Recruitment, working/employment conditions and inclusiveness

²

<http://www.geant.org>

The principles of the **European Charter for Researchers** ([Charter](#)) promoting open, merit-based and transparent recruitment and attractive working and employment conditions are a cornerstone of the MSCA and all funded host organisations must put effort into applying them. The MSCA pay particular attention to **equal opportunities and inclusiveness**. In line with the Charter, all MSCA-funded projects are encouraged to embrace diversity and take measures to facilitate mobility and counter-act gender and disability-related barriers to it.

MSCA projects are also encouraged to facilitate access by **researchers at risk**³, through tailored support and career services, including job search assistance in the researcher's new geographical area.

Supervision

The MSCA promote effective supervision, which contribute to creating a supportive environment for the researchers to conduct their work. In line with the principles set out in the Charter, MSCA beneficiaries must ensure **adequately supervision or mentoring and appropriate career guidance**. Supervision is one of the crucial elements of successful research. Guiding, supporting, directing, advising and mentoring are key factors for a researcher to pursue his/her career path. In this context, all MSCA-funded projects are encouraged to follow the recommendations outlined in the **Guidelines for MSCA supervision**⁴.

Open Science and Responsible Research and Innovation

The MSCA endorse **Open Science** and **Responsible Research and Innovation** (RRI) through engaging society at large, integrating the gender and ethical dimensions, promoting Open Science practices through targeted training activities, ensuring open access to research outcomes, including FAIR⁵ data handling, encouraging formal and informal science education and feeding back research results into teaching and education.

The European Commission has also signed the **Agreement on Reforming Research Assessment**⁶, which establishes a common direction for research assessment reforms, while respecting organisations' autonomy.

European Green Deal

The MSCA support **bottom-up and frontier/applied research** contributing directly to the European Commission's commitment to tackling climate and environmental-related challenges. Under Horizon Europe, the MSCA will significantly contribute to promote sustainable research in line with the European Green Deal, the United Nation's 2030 Agenda and the Sustainable Development Goals. All MSCA-funded projects are encouraged to

³ The term 'researcher at risk' refers to researchers at all stages of their career who are experiencing threats to their life, liberty, or research career, and those who are forced or have been forced to flee because of such threats.

⁴ <https://ec.europa.eu/msca/supervision>. While the Guidelines for MSCA supervision are non-binding, funded-projects are strongly encouraged to take them into account.

⁵ FAIR = Findable, Accessible, Interoperable, Reusable.

⁶ [agreement_final.pdf \(coara.eu\)](#)

address the principles of the **MSCA Green Charter**⁷ and implement measures to minimise the environmental footprint of their activities.

Synergies

The MSCA promote the creation of strong links with the cohesion policy funds⁸ and the Recovery and Resilience Facility (RRF)⁹, notably by creating synergies through its COFUND action and enabling complementarities via awarding a Seal of Excellence¹⁰ certificate to proposals submitted to mono-beneficiary MSCA calls. The Seal is awarded to proposals that exceed all the evaluation thresholds set out in this work programme but cannot be funded due to lack of budget. The MSCA also encourage complementarities with other parts of Horizon Europe, such as the European Innovation Council¹¹ and European Institute of Innovation and Technology (EIT)¹², and synergies with other Union programmes, notably Erasmus+¹³, including its European Universities Initiative.

MSCA Intervention areas

There are five main MSCA intervention areas as set out in the Council Decision establishing the specific programme implementing Horizon Europe (Annex 1, page 11-13). All individual Marie Skłodowska-Curie Actions contribute to these intervention areas to one extent or the other:

1. Nurturing Excellence through Mobility of Researchers across Borders, Sectors and Disciplines;
2. Fostering new Skills through Excellent Training of Researchers;
3. Strengthening Human Capital and Skills Development across the European Research Area;
4. Improving and Facilitating Synergies;

⁷ https://ec.europa.eu/msca/green_charter. While the MSCA Green Charter is non-binding, funded projects are strongly encouraged to take into account the principles it sets out.

⁸ “Synergies between Horizon Europe and ERDF programmes (Draft Commission Notice)” C(2022) 4747 final. https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/synergies-guidance-out-2022-07-06_en

⁹ The Recovery and Resilience Facility supports reforms and investments undertaken by Member States. The aim is to mitigate the economic and social impact of the coronavirus pandemic and make European economies and societies more sustainable, resilient and better prepared for the challenges and opportunities of the green and digital transitions.

¹⁰ https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/seal-excellence/funding-opportunities-under-msca_en

¹¹ See particularly “Next generation Innovation Talents” under “Other actions” of the 2023 Work Programme of the EIC.

¹² “Synergies between the Marie Skłodowska-Curie actions and the European Institute of Innovation and Technology”. <https://op.europa.eu/en/publication-detail/-/publication/40f1a820-2cc2-11ed-975d-01aa75ed71a1/language-en>

¹³ “Synergies between the Marie Skłodowska-Curie Actions and Erasmus+ in the area of higher education”. <https://op.europa.eu/en/publication-detail/-/publication/f4d7d733-19ba-11ec-b4fe-01aa75ed71a1/language-en/>

5. Promoting Public Outreach.

The following Actions within the MSCA are implementing these intervention areas:

Action	Main Objective
MSCA Doctoral Networks	The MSCA Doctoral Networks aim to train creative, entrepreneurial, innovative and resilient doctoral candidates, able to face current and future challenges and to convert knowledge and ideas into products and services for economic and social benefit. The MSCA Doctoral Networks will raise the attractiveness and excellence of doctoral training in Europe. They will equip researchers with the right combination of research-related and transferable competences and provide them with enhanced career perspectives in both the academic ¹⁴ and non-academic sectors through international, inter-sectoral and interdisciplinary mobility combined with an innovation-oriented mind-set.
MSCA Postdoctoral Fellowships	The goal of MSCA Postdoctoral Fellowships is to enhance the creative and innovative potential of researchers holding a PhD, wishing to acquire new skills through advanced training, international, inter-sectoral and interdisciplinary mobility. MSCA Postdoctoral Fellowships are open to excellent researchers of any nationality, including researchers wishing to reintegrate in Europe, researchers who are displaced by conflict as well as researchers with high potential aiming for a career restart in research. The scheme also encourages researchers to work on research and innovation projects in the non-academic sector.
MSCA Staff Exchanges	MSCA Staff Exchanges promote innovative international, inter-sectoral and interdisciplinary collaboration in research and innovation through exchanging staff and sharing knowledge and ideas at all stages of the innovation chain. The scheme fosters a shared culture of research and innovation that welcomes and rewards creativity and entrepreneurship and helps turn ideas into innovative products, services or processes. It is open to research, technical, administrative and managerial staff.
MSCA COFUND	MSCA COFUND co-finances new or existing doctoral programmes and postdoctoral fellowship schemes at national, regional or international level with the aim to spread the best practices of the MSCA including international, inter-sectoral and interdisciplinary research training, as well as international and cross-sectoral mobility of researchers at all stages of their career.
MSCA and Citizens	MSCA and Citizens , through the European Researchers' Night, aims to bring research and researchers closer to the public at large, to increase

¹⁴

See definitions at the end of the Work Programme part

	awareness of research and innovation activities and to boost public recognition of science and research education. It will also show the role of the researcher for the society and economy, as well as the impact of researchers' work on citizens' daily lives, and aim at raising young people's interest for research and scientific careers.
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MSCA Doctoral Networks

The MSCA Doctoral Networks aim to train creative, entrepreneurial, innovative and resilient doctoral candidates, able to face current and future challenges and to convert knowledge and ideas into products and services for economic and social benefit.

The MSCA Doctoral Networks will raise the attractiveness and excellence of doctoral training in Europe. They will equip researchers with the right combination of research-related and transferable competences and provide them with enhanced career perspectives in both the academic and non-academic sectors through international, inter-sectoral and interdisciplinary mobility combined with an innovation-oriented mind-set.

Expected impact

Proposals under this Action should contribute to the following expected impacts:

- Strengthen Europe's human capital base in R&I by training highly-skilled doctoral candidates;
- Improve the attractiveness of researchers' careers notably through better working and employment conditions of doctoral candidates in Europe;
- Enhance talent and knowledge circulation across the R&I landscape, through international, inter-sectoral and interdisciplinary mobility;
- Increase Europe's attractiveness as a leading research destination;
- Enhance the quality of R&I contributing to Europe's sustainable competitiveness;
- Establish sustainable collaboration between academic and non-academic organisations;
- Foster the culture of open science, innovation and entrepreneurship.

The following call(s) in this work programme contribute to this Action:

Call	Budgets (EUR million)			Deadline(s)
	2023	2024	2025	
HORIZON- MSCA-2023- DN-01	434.80			28 Nov 2023
HORIZON- MSCA-2024- DN-01		608.60		27 Nov 2024

HORIZON- MSCA-2025- DN-01			597.80	25 Nov 2025
Overall indicative budget	434.80	608.60	597.80	

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Call - MSCA Doctoral Networks 2023

HORIZON-MSCA-2023-DN-01

Conditions for the Call

Indicative budget(s)¹⁵

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2023		
Opening: 30 May 2023 Deadline(s): 28 Nov 2023				
HORIZON-MSCA-2023-DN-01-01	TMA Doctoral Networks	434.80		Not relevant
HORIZON-MSCA-2023-DN-01-01	TMA Doctoral Networks - Industrial Doctorates			Not relevant
HORIZON-MSCA-2023-DN-01-01	TMA Doctoral Networks - Joint Doctorates			Not relevant
Overall indicative budget		434.80		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A. See exceptions and specific conditions at the end of this work programme part.
<i>Eligibility conditions</i>	The general conditions are described in General Annex B. See exceptions and specific conditions at the end of this work programme part.
<i>Financial and</i>	The criteria are described in General Annex C.

¹⁵ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

<i>operational capacity and exclusion</i>	
<i>Award criteria</i>	For application of the general award criteria, including weighting and thresholds, see the specific conditions at the end of this Work Programme part.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The general procedure is described in General Annex F. See exceptions and specific conditions at the end of this work programme part.
<i>Expected EU contribution per project</i>	The expected EU contribution depends on the number of person-months requested. For the applicable unit contributions, see specific conditions for MSCA at the end of this Work Programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	The general conditions are described in General Annex G. See exceptions and specific conditions at the end of this Work Programme part.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2023-DN-01-01: MSCA Doctoral Networks 2023

Expected Outcome: Project results are expected to contribute to the following outcomes:

For supported doctoral candidates

- New research and transferable skills and competences, leading to improved employability and career prospects within and outside academia;
- New knowledge allowing the conversion of ideas into products and services, where relevant;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

For participating organisations

- Improved quality, relevance and sustainability of doctoral training programmes and supervision arrangements;
- Enhanced cooperation and transfer of knowledge between sectors and disciplines;
- Increased integration of training and research activities between participating organisations;

- Boosted R&I capacity;
- Increased internationalisation and attractiveness;
- Regular feedback of research results into teaching and education at participating organisations.

Scope: MSCA Doctoral Networks will implement doctoral programmes, by partnerships of universities, research institutions and research infrastructures, businesses including SMEs, and other socio-economic actors from different countries across Europe and beyond. MSCA Doctoral Networks are indeed open to the participation of organisations from third countries, in view of fostering strategic international partnerships for the training and exchange of researchers.

These doctoral programmes will respond to well-identified needs in various R&I areas, expose the researchers to the academic and non-academic sectors, and offer training in research-related, as well as transferable skills¹⁶ and competences relevant for innovation and long-term employability (e.g. entrepreneurship, commercialisation of results, Intellectual Property Rights, communication). Proposals for doctoral networks can reflect existing or planned research partnerships among the participating organisations.

The selection procedure for doctoral candidates must be open, transparent and merit-based, in line with the Code of Conduct for the Recruitment of Researchers. The vacancy notice (to be widely advertised internationally, including on the EURAXESS¹⁷ website) must mention if the published rates include all employer and employee's taxes and contributions. If possible, the gross salary (net salary + employee's taxes and contributions) should be published.

MSCA Doctoral Networks are encouraged to lead to Industrial or Joint Doctorates.

Industrial Doctorates

Through Industrial Doctorates, doctoral candidates will step outside academia and develop skills in industry and business by being jointly supervised by academic and non-academic organisations, both of which can be established in the same EU Member State or Horizon Europe Associated Country.

Joint Doctorates

Joint Doctorates represent a highly integrated type of international, inter-sectoral and multi/interdisciplinary collaboration in doctoral training. They lead to the delivery of joint, double or multiple doctoral degrees¹⁸ recognised in at least two EU Member States or Horizon Europe Associated Countries.

¹⁶ As an illustration, Eurodoc published a list of such transferable skills at: <http://eurodoc.net/skills-report-2018.pdf>

¹⁷ <https://euraxess.ec.europa.eu/>

¹⁸ Every time this Work Programme part refers to doctoral degrees, this means that the degrees have to be recognised as such by the relevant authorities of the country or countries concerned.

Supervisory Board

Each MSCA Doctoral Network should have a clearly identified supervisory board co-ordinating network-wide training, research and in particular supervision activities in line with the Guidelines for MSCA supervision, while establishing continuous communication and exchange of best practice among the participating organisations to maximise the benefits of the partnership.

Training activities

MSCA Doctoral Networks should exploit complementarities between participating organisations and foster sharing of knowledge and networking activities for example through the organisation of workshops and conferences. Proposed training activities should respond to well identified needs in various R&I areas, with appropriate references to inter- and multidisciplinary fields and follow the EU Principles for Innovative Doctoral Training¹⁹. They should be primarily focused on developing new scientific knowledge through original research on personalised projects.

Inter-sectoral secondments of researchers to other participating organisations, including in third countries, are encouraged when relevant, feasible and beneficial for the researchers and in line with the project objectives. This will increase the employability of the researchers outside academia.

Doctoral Networks should develop substantial training modules, including digital ones, addressing key transferable skills and competences common to all fields and fostering the culture of Open Science, innovation and entrepreneurship as well as good scientific conduct such as research integrity. In particular, Doctoral Networks should adequately prepare doctoral candidates for increased research collaboration and information-sharing made possible by new (digital) technologies (e.g. collaborative tools, opening access to publications and to other research outputs including data, FAIR data management, societal engagement and citizen science, etc.).

Supervision

Particular attention is paid to the quality of supervision and mentoring arrangements as well as career guidance. Joint supervision of the researchers is mandatory for Industrial and Joint Doctorates.

Career Development Plan

A Career Development Plan must be established jointly by the supervisor and each recruited doctoral candidate. In case of joint supervision, such a plan should be established involving all supervisors. In addition to research objectives, this plan comprises the researcher's training and career needs, including training on transferable skills, teaching, planning for publications and participation in conferences and events aiming at opening science and research to

¹⁹ [principles_for_innovative_doctoral_training.pdf](#)

citizens. The plan, established at the beginning of the recruitment, should be revised (and updated where needed) within 18 months.

Call - MSCA Doctoral Networks 2024

HORIZON-MSCA-2024-DN-01

Conditions for the Call

Indicative budget(s)²⁰

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2024		
Opening: 29 May 2024 Deadline(s): 27 Nov 2024				
HORIZON-MSCA-2024-DN-01-01	TMA Doctoral Networks	608.60		Not relevant
HORIZON-MSCA-2024-DN-01-01	TMA Doctoral Networks - Industrial Doctorates			Not relevant
HORIZON-MSCA-2024-DN-01-01	TMA Doctoral Networks - Joint Doctorates			Not relevant
Overall indicative budget		608.60		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A. See exceptions and specific conditions at the end of this work programme part.
<i>Eligibility conditions</i>	The general conditions are described in General Annex B. See exceptions and specific conditions at the end of this work programme part.

²⁰ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	For application of the general award criteria, including weighting and thresholds, see the specific conditions at the end of this Work Programme part.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The general procedure is described in General Annex F. See exceptions and specific conditions at the end of this work programme part.
<i>Expected EU contribution per project</i>	The expected EU contribution depends on the number of person-months requested. For the applicable unit contributions, see specific conditions for MSCA at the end of this Work Programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	The general conditions are described in General Annex G. See exceptions and specific conditions at the end of this Work Programme part.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2024-DN-01-01: MSCA Doctoral Networks 2024

Expected Outcome: Project results are expected to contribute to the following outcomes:

For supported doctoral candidates

- New research and transferable skills and competences, leading to improved employability and career prospects within and outside academia;
- New knowledge allowing the conversion of ideas into products and services, where relevant;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

For participating organisations

- Improved quality, relevance and sustainability of doctoral training programmes and supervision arrangements;
- Enhanced cooperation and transfer of knowledge between sectors and disciplines;

- Increased integration of training and research activities between participating organisations;
- Boosted R&I capacity;
- Increased internationalisation and attractiveness;
- Regular feedback of research results into teaching and education at participating organisations.

Scope: MSCA Doctoral Networks will implement doctoral programmes, by partnerships of universities, research institutions and research infrastructures, businesses including SMEs, and other socio-economic actors from different countries across Europe and beyond. MSCA Doctoral Networks are indeed open to the participation of organisations from third countries, in view of fostering strategic international partnerships for the training and exchange of researchers.

These doctoral programmes will respond to well-identified needs in various R&I areas, expose the researchers to the academic and non-academic sectors, and offer training in research-related, as well as transferable skills and competences relevant for innovation and long-term employability (e.g. entrepreneurship, commercialisation of results, Intellectual Property Rights, communication). Proposals for doctoral networks can reflect existing or planned research partnerships among the participating organisations.

The selection procedure for doctoral candidates must be open, transparent and merit-based, in line with the Code of Conduct for the Recruitment of Researchers. The vacancy notice (to be widely advertised internationally, including on the EURAXESS²¹ website) must mention if the published rates include all employer and employee's taxes and contributions. If possible, the gross salary (net salary + employee's taxes and contributions) should be published.

MSCA Doctoral Networks are encouraged to lead to Industrial or Joint Doctorates.

Industrial Doctorates

Through Industrial Doctorates, doctoral candidates will step outside academia and develop skills in industry and business by being jointly supervised by academic and non-academic organisations, both of which can be established in the same EU Member State or Horizon Europe Associated Country.

Joint Doctorates

Joint Doctorates represent a highly integrated type of international, inter-sectoral and multi/interdisciplinary collaboration in doctoral training. They lead to the delivery of joint,

²¹ <https://euraxess.ec.europa.eu/>

double or multiple doctoral degrees²² recognised in at least one EU Member State or Horizon Europe Associated Country.

Supervisory Board

Each MSCA Doctoral Network should have a clearly identified supervisory board co-ordinating network-wide training, research and in particular supervision activities in line with the Guidelines for MSCA supervision, while establishing continuous communication and exchange of best practice among the participating organisations to maximise the benefits of the partnership.

Training activities

MSCA Doctoral Networks should exploit complementarities between participating organisations and foster sharing of knowledge and networking activities for example through the organisation of workshops and conferences. Proposed training activities should respond to well identified needs in various R&I areas, with appropriate references to inter- and multidisciplinary fields and follow the EU Principles for Innovative Doctoral Training²³. They should be primarily focused on developing new scientific knowledge through original research on personalised projects.

Inter-sectoral secondments of researchers to other participating organisations, including in third countries, are encouraged when relevant, feasible and beneficial for the researchers and in line with the project objectives. This will increase the employability of the researchers outside academia.

Doctoral Networks should develop substantial training modules, including digital ones, addressing key transferable skills and competences common to all fields and fostering the culture of Open Science, innovation and entrepreneurship as well as good scientific conduct such as research integrity. In particular, Doctoral Networks should adequately prepare doctoral candidates for increased research collaboration and information-sharing made possible by new (digital) technologies (e.g. collaborative tools, opening access to publications and to other research outputs including data, FAIR data management, societal engagement and citizen science, etc.).

Supervision

Particular attention is paid to the quality of supervision and mentoring arrangements as well as career guidance. Joint supervision of the researchers is mandatory for Industrial and Joint Doctorates.

Career Development Plan

²² Every time this Work Programme part refers to doctoral degrees, this means that the degrees have to be recognised as such by the relevant authorities of the country or countries concerned.

²³ [principles_for_innovative_doctoral_training.pdf](#)

A Career Development Plan must be established jointly by the supervisor and each recruited doctoral candidate. In case of joint supervision, such a plan should be established involving all supervisors. In addition to research objectives, this plan comprises the researcher's training and career needs, including training on transferable skills, teaching, planning for publications and participation in conferences and events aiming at opening science and research to citizens. The plan, established at the beginning of the recruitment, should be revised (and updated where needed) within 18 months.

Call - MSCA Doctoral Networks 2025

HORIZON-MSCA-2025-DN-01

Conditions for the Call

Indicative budget(s)²⁴

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2025		
Opening: 28 May 2025 Deadline(s): 25 Nov 2025				
HORIZON-MSCA-2025-DN-01-01	TMA Doctoral Networks	597.80		Not relevant
HORIZON-MSCA-2025-DN-01-01	TMA Doctoral Networks - Industrial Doctorates			Not relevant
HORIZON-MSCA-2025-DN-01-01	TMA Doctoral Networks - Joint Doctorates			Not relevant
Overall indicative budget		597.80		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A. See exceptions
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²⁴ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

	and specific conditions at the end of this work programme part.
<i>Eligibility conditions</i>	The general conditions are described in General Annex B. See exceptions and specific conditions at the end of this work programme part.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	For application of the general award criteria, including weighting and thresholds, see the specific conditions at the end of this Work Programme part.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The general procedure is described in General Annex F. See exceptions and specific conditions at the end of this work programme part.
<i>Expected EU contribution per project</i>	The expected EU contribution depends on the number of person-months requested. For the applicable unit contributions, see specific conditions for MSCA at the end of this Work Programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	The general conditions are described in General Annex G. See exceptions and specific conditions at the end of this Work Programme part.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2025-DN-01-01: MSCA Doctoral Networks 2025

Expected Outcome: Project results are expected to contribute to the following outcomes:

For supported doctoral candidates

- New research and transferable skills and competences, leading to improved employability and career prospects within and outside academia;
- New knowledge allowing the conversion of ideas into products and services, where relevant;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

For participating organisations

- Improved quality, relevance and sustainability of doctoral training programmes and supervision arrangements;
- Enhanced cooperation and transfer of knowledge between sectors and disciplines;
- Increased integration of training and research activities between participating organisations;
- Boosted R&I capacity;
- Increased internationalisation and attractiveness;
- Regular feedback of research results into teaching and education at participating organisations.

Scope: MSCA Doctoral Networks will implement doctoral programmes, by partnerships of universities, research institutions and research infrastructures, businesses including SMEs, and other socio-economic actors from different countries across Europe and beyond. MSCA Doctoral Networks are indeed open to the participation of organisations from third countries, in view of fostering strategic international partnerships for the training and exchange of researchers.

These doctoral programmes will respond to well-identified needs in various R&I areas, expose the researchers to the academic and non-academic sectors, and offer training in research-related, as well as transferable skills and competences relevant for innovation and long-term employability (e.g. entrepreneurship, commercialisation of results, Intellectual Property Rights, communication). Proposals for doctoral networks can reflect existing or planned research partnerships among the participating organisations.

The selection procedure for doctoral candidates must be open, transparent and merit-based, in line with the Code of Conduct for the Recruitment of Researchers. The vacancy notice (to be widely advertised internationally, including on the EURAXESS²⁵ website) must mention if the published rates include all employer and employee's taxes and contributions. If possible, the gross salary (net salary + employee's taxes and contributions) should be published.

MSCA Doctoral Networks are encouraged to lead to Industrial or Joint Doctorates.

Industrial Doctorates

Through Industrial Doctorates, doctoral candidates will step outside academia and develop skills in industry and business by being jointly supervised by academic and non-academic organisations, both of which can be established in the same EU Member State or Horizon Europe Associated Country.

Joint Doctorates

²⁵ <https://euraxess.ec.europa.eu/>

Joint Doctorates represent a highly integrated type of international, inter-sectoral and multi/interdisciplinary collaboration in doctoral training. They lead to the delivery of joint, double or multiple doctoral degrees²⁶ recognised in at least one EU Member State or Horizon Europe Associated Country.

Supervisory Board

Each MSCA Doctoral Network should have a clearly identified supervisory board co-ordinating network-wide training, research and in particular supervision activities in line with the Guidelines for MSCA supervision, while establishing continuous communication and exchange of best practice among the participating organisations to maximise the benefits of the partnership.

Training activities

MSCA Doctoral Networks should exploit complementarities between participating organisations and foster sharing of knowledge and networking activities for example through the organisation of workshops and conferences. Proposed training activities should respond to well identified needs in various R&I areas, with appropriate references to inter- and multidisciplinary fields and follow the EU Principles for Innovative Doctoral Training²⁷. They should be primarily focused on developing new scientific knowledge through original research on personalised projects.

Inter-sectoral secondments of researchers to other participating organisations, including in third countries, are encouraged when relevant, feasible and beneficial for the researchers and in line with the project objectives. This will increase the employability of the researchers outside academia.

Doctoral Networks should develop substantial training modules, including digital ones, addressing key transferable skills and competences common to all fields and fostering the culture of Open Science, innovation and entrepreneurship as well as good scientific conduct such as research integrity. In particular, Doctoral Networks should adequately prepare doctoral candidates for increased research collaboration and information-sharing made possible by new (digital) technologies (e.g. collaborative tools, opening access to publications and to other research outputs including data, FAIR data management, societal engagement and citizen science, etc.).

Supervision

Particular attention is paid to the quality of supervision and mentoring arrangements as well as career guidance. Joint supervision of the researchers is mandatory for Industrial and Joint Doctorates.

Career Development Plan

²⁶ Every time this Work Programme part refers to doctoral degrees, this means that the degrees have to be recognised as such by the relevant authorities of the country or countries concerned.

²⁷ [principles_for_innovative_doctoral_training.pdf](#)

A Career Development Plan must be established jointly by the supervisor and each recruited doctoral candidate. In case of joint supervision, such a plan should be established involving all supervisors. In addition to research objectives, this plan comprises the researcher's training and career needs, including training on transferable skills, teaching, planning for publications and participation in conferences and events aiming at opening science and research to citizens. The plan, established at the beginning of the recruitment, should be revised (and updated where needed) within 18 months.

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MSCA Postdoctoral Fellowships

The goal of MSCA Postdoctoral Fellowships is to enhance the creative and innovative potential of researchers holding a PhD and who wish to acquire new skills through advanced training, international, inter-sectoral and interdisciplinary mobility. MSCA Postdoctoral Fellowships will be open to excellent researchers of any nationality. The scheme also encourages researchers to work on research and innovation projects in the non-academic sector and is open to researchers wishing to reintegrate in Europe, to those who are displaced by conflict, as well as to researchers with high potential who are seeking to restart their careers in research.

Through the implementation of an original and personalised research project, MSCA Postdoctoral Fellowships aim to foster excellence through training and mobility and to equip researchers with new skills and competences in order to identify solutions to current and future challenges. Postdoctoral researchers are encouraged to engage with society at large to make the results of their research visible to citizens and to involve citizens, civil society and end-users in co-creation of research content when relevant.

Expected impact

Proposals under this Action should contribute to the following expected impacts:

- Enhance the creative and innovative potential of researchers holding a PhD and wishing to diversify their individual competences and skills through advanced training, international, interdisciplinary and inter-sectoral mobility while implementing excellent research projects across all sectors of research;
- Strengthen Europe's human capital base in R&I with better trained, innovative and entrepreneurial researchers;
- Enhance the quality of R&I contributing to Europe's competitiveness and growth;
- Contribute to Europe's attractiveness as a leading destination for R&I and for good working conditions of researchers;
- Facilitate knowledge transfer and brain circulation across the ERA;
- Foster the culture of open science, innovation and entrepreneurship.

The following call(s) in this work programme contribute to this Action:

Call	Budgets (EUR million)			Deadline(s)
	2023	2024	2025	
HORIZON- MSCA-2023-PF-	260.47			13 Sep 2023

01				
HORIZON- MSCA-2024-PF- 01		417.18		11 Sep 2024
HORIZON- MSCA-2025-PF			404.29	10 Sep 2025
Overall indicative budget	260.47	417.18	404.29	

Call - MSCA Postdoctoral Fellowships 2023

HORIZON-MSCA-2023-PF-01

Conditions for the Call

Indicative budget(s)²⁸

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2023		
Opening: 12 Apr 2023 Deadline(s): 13 Sep 2023				
HORIZON-MSCA-2023-PF-01-01	TMA Postdoctoral Fellowships - European Fellowships	221.40		Not relevant
HORIZON-MSCA-2023-PF-01-01	TMA Postdoctoral Fellowships - Global Fellowships	39.07		Not relevant
Overall indicative budget		260.47		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A. See exceptions and specific conditions at the end of this work programme part.
<i>Eligibility conditions</i>	The general conditions are described in General Annex B. See exceptions and specific conditions at the end of this work programme part.
<i>Financial and operational capacity</i>	The criteria are described in General Annex C.

²⁸

The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

<i>and exclusion</i>	
<i>Award criteria</i>	For application of the general award criteria, including weighting and thresholds, see the specific conditions at the end of this Work Programme part.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The general procedure is described in General Annex F. See exceptions and specific conditions at the end of this work programme part.
<i>Expected EU contribution per project</i>	The expected EU contribution depends on the number of person-months requested. For the applicable unit contributions, see specific conditions for MSCA at the end of this Work Programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	The general conditions are described in General Annex G. See exceptions and specific conditions at the end of this Work Programme part.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2023-PF-01-01: MSCA Postdoctoral Fellowships 2023

Specific conditions	
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 221.40 million.
<i>Type of Action</i>	TMA Postdoctoral Fellowships - European Fellowships
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 39.07 million.
<i>Type of Action</i>	TMA Postdoctoral Fellowships - Global Fellowships

Expected Outcome: Project results are expected to contribute to the following outcomes:

For supported postdoctoral fellows

- Increased set of research and transferable skills and competences, leading to improved employability and career prospects of MSCA postdoctoral fellows within academia and beyond;
- New mind-sets and approaches to R&I work forged through international, inter-sectoral and interdisciplinary experience;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

For participating organisations

- Increased alignment of working conditions for researchers in accordance with the principles set out in the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers;
- Enhanced quality and sustainability of research training and supervision;
- Increased global attractiveness, visibility and reputation of the participating organisation(s);
- Stronger R&I capacity and output among participating organisations; better transfer of knowledge;
- Regular feedback of research results into teaching and education at participating organisations.

Scope: Fellowships will be provided to excellent researchers undertaking international mobility. Applications will be made jointly by the researcher and a beneficiary in the academic or non-academic sector.

Postdoctoral Fellowships either can take place in Europe (i.e. in an EU Member State or a Horizon Europe Associated Country) or in a Third Country not associated to Horizon Europe:

- European Postdoctoral Fellowships are open to researchers of any nationality who wish to engage in R&I projects by either coming to Europe from any country in the world or moving within Europe. The standard duration of these fellowships must be between 12 and 24 months.
- Global Postdoctoral Fellowships are open to European nationals or long-term residents²⁹ who wish to engage in R&I projects with organisations outside EU Member States and Horizon Europe Associated Countries. These fellowships require an outgoing phase of minimum 12 and maximum 24 months in a non-associated Third Country, and a mandatory 12-month return phase to a host organisation based in an EU Member State or a Horizon Europe Associated Country.

Specific eligibility conditions apply to MSCA Postdoctoral Fellowships in the research areas covered by the Euratom Research and Training Programme 2021-2025³⁰.

Secondments

Researchers receiving a Postdoctoral Fellowship may opt to include a secondment phase, within the overall duration of their fellowship in any country worldwide. The secondment phase can be a single period or be divided into shorter mobility periods.

²⁹ See eligibility conditions at the end of this Work Programme part.

³⁰ See eligibility conditions at the end of this Work Programme part.

For European Postdoctoral Fellowships, secondments cannot exceed one third of the requested duration of the action (excluding from the duration of the action any additional period for a non-academic placement) and should be in line with the project objectives, adding significant value and impact to the fellowship.

For Global Postdoctoral Fellowships, optional secondments are permitted for up to one third of the outgoing phase. A maximum of three months of such secondments can be spent at the start of the project at the beneficiary (or associated partners linked to the beneficiary), allowing the researcher to spend time there before going to the associated partner in the Third Country. This period of maximum three months will be considered as part of the outgoing phase.

Secondments cannot take place during the mandatory twelve-month return period to the host organisation in an EU Member State or Horizon Europe Associated Country.

Placements in the non-academic sector

Postdoctoral Fellowships can provide an additional period of up to six months to support researchers opting for a placement at the end of the project to work on R&I projects in an organisation from the non-academic sector established in an EU Member State or Horizon Europe Associated Country³¹. While this possibility is also available to fellows recruited in the non-academic sector, such a placement must be implemented at a different non-academic host organisation established in an EU Member State or Horizon Europe Associated Country³². The request for such a non-academic placement must be an integral part of the proposal, explaining the added-value for the project and for the career development of the researcher, and will be subject to evaluation. This incentive aims at promoting career moves between sectors and organisations and thereby stimulate innovation and knowledge transfer while expanding career opportunities for researchers.

If the placement does not meet the requirements (taking place in an academic organisation or in a Third Country), the proposal will be evaluated without taking into account the placement. This might affect the final score.

Training activities

The training activities implemented under the Postdoctoral Fellowships should include training for key transferable skills³³, foster innovation and entrepreneurship, (e.g. commercialisation of results, Intellectual Property Rights, communication, public engagement and citizen science), foster good scientific conduct such as research integrity and promote Open Science practices (open access to publications and to other research outputs including data, FAIR data management, societal engagement and citizen science etc.).

³¹ For proposals in the research areas covered by the Euratom Research and Training Programme, the organisation from the non-academic sector must be established in an EU Member State or a country associated to the Euratom Research and Training Programme 2021-2025

³² idem

³³ As an illustration, Eurodoc published a list of such transferable skills at: <http://eurodoc.net/skills-report-2018.pdf>

Career Development Plan

In order to equip MSCA postdoctoral fellows with skills that enhance and expand their career opportunities inside and outside academia, a Career Development Plan should be established jointly by the supervisor(s) and the researcher. In addition to research objectives, this plan should comprise the researcher's training and career needs, including training on transferable skills, teaching, planning for publications and participation in conferences and events aiming at opening science and research to citizens. The Plan will have to be submitted as a project deliverable at the beginning of the action and can be updated when needed.

Euratom

Aiming to enhance nuclear expertise and excellence as well as synergies between Programmes, organisations active in nuclear research established in one of EU Member States or countries associated to the Euratom Research and Training programme 2021-2025, are eligible to participate³⁴. MSCA Postdoctoral Fellowships in this area of research will be supported by the Euratom Research and Training Programme 2021-2025 through an indicative annual financial contribution of EUR 1 million to the MSCA Postdoctoral Fellowships call³⁵.

ERA Fellowships

The ERA Fellowships implemented through Work Programme Annex 11, Widening Participation and Strengthening the European Research Area, provide specific support to researchers to undertake their fellowship in a widening country³⁶. This will help spread excellence and contribute to fostering balanced brain circulation in widening countries.

Call - MSCA Postdoctoral Fellowships 2024

HORIZON-MSCA-2024-PF-01

Conditions for the Call

Indicative budget(s)³⁷

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution	Indicative number of projects
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³⁴ See eligibility conditions at the end of this Work Programme part

³⁵ As indicated in the Euratom Work Programme

³⁶ These countries are aligned with Work Programme part 11, Widening Participation and Strengthening the European Research Area

³⁷ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

		2024	per project (EUR million)	expected to be funded
<p>Opening: 23 Apr 2024</p> <p>Deadline(s): 11 Sep 2024</p>				
HORIZON-MSCA-2024-PF-01-01	TMA Fellowships - Postdoctoral European Fellowships	354.60		Not relevant
HORIZON-MSCA-2024-PF-01-01	TMA Fellowships - Postdoctoral Global Fellowships	62.58		Not relevant
Overall indicative budget		417.18		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A. See exceptions and specific conditions at the end of this work programme part.
<i>Eligibility conditions</i>	The general conditions are described in General Annex B. See exceptions and specific conditions at the end of this work programme part.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	For application of the general award criteria, including weighting and thresholds, see the specific conditions at the end of this Work Programme part.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The general procedure is described in General Annex F. See exceptions and specific conditions at the end of this work programme part.
<i>Expected EU contribution per project</i>	The expected EU contribution depends on the number of person-months requested. For the applicable unit contributions, see specific conditions for MSCA at the end of this Work Programme part.
<i>Legal and financial set-</i>	The general conditions are described in General Annex G. See

<i>up of the Grant Agreements</i>	exceptions and specific conditions at the end of this Work Programme part.
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Proposals are invited against the following topic(s):

HORIZON-MSCA-2024-PF-01-01: MSCA Postdoctoral Fellowships 2024

Specific conditions	
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 354.60 million.
<i>Type of Action</i>	TMA Postdoctoral Fellowships - European Fellowships
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 62.58 million.
<i>Type of Action</i>	TMA Postdoctoral Fellowships - Global Fellowships

Expected Outcome: Project results are expected to contribute to the following outcomes:

For supported postdoctoral fellows

- Increased set of research and transferable skills and competences, leading to improved employability and career prospects of MSCA postdoctoral fellows within academia and beyond;
- New mind-sets and approaches to R&I work forged through international, inter-sectoral and interdisciplinary experience;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

For participating organisations

- Increased alignment of working conditions for researchers in accordance with the principles set out in the European Charter for Researchers;
- Enhanced quality and sustainability of research training and supervision;
- Increased global attractiveness, visibility and reputation of the participating organisation(s);
- Stronger R&I capacity and output among participating organisations; better transfer of knowledge;
- Regular feedback of research results into teaching and education at participating organisations.

Scope: Fellowships will be provided to excellent researchers undertaking international mobility. Applications will be made jointly by the researcher and a beneficiary in the academic or non-academic sector.

Postdoctoral Fellowships either can take place in Europe (i.e. in an EU Member State or a Horizon Europe Associated Country) or in a Third Country not associated to Horizon Europe:

- European Postdoctoral Fellowships are open to researchers of any nationality who wish to engage in R&I projects by either coming to Europe from any country in the world or moving within Europe. The standard duration of these fellowships must be between 12 and 24 months.
- Global Postdoctoral Fellowships are open to European nationals or long-term residents³⁸ who wish to engage in R&I projects with organisations outside EU Member States and Horizon Europe Associated Countries. These fellowships require an outgoing phase of minimum 12 and maximum 24 months in a non-associated Third Country, and a mandatory 12-month return phase to a host organisation based in an EU Member State or a Horizon Europe Associated Country.

Specific eligibility conditions apply to MSCA Postdoctoral Fellowships in the research areas covered by the Euratom Research and Training Programme 2021-2025³⁹.

Secondments

Researchers receiving a Postdoctoral Fellowship may opt to include a secondment phase, within the overall duration of their fellowship in any country worldwide. The secondment phase can be a single period or be divided into shorter mobility periods.

For European Postdoctoral Fellowships, secondments cannot exceed one third of the requested duration of the action (excluding from the duration of the action any additional period for a non-academic placement) and should be in line with the project objectives, adding significant value and impact to the fellowship.

For Global Postdoctoral Fellowships, optional secondments are permitted for up to one third of the outgoing phase. A maximum of three months of such secondments can be spent at the start of the project at the beneficiary (or associated partners linked to the beneficiary), allowing the researcher to spend time there before going to the associated partner in the Third Country. This period of maximum three months will be considered as part of the outgoing phase.

Secondments cannot take place during the mandatory twelve-month return period to the host organisation in an EU Member State or Horizon Europe Associated Country.

Placements in the non-academic sector

³⁸ See eligibility conditions at the end of this Work Programme part.

³⁹ See eligibility conditions at the end of this Work Programme part.

Postdoctoral Fellowships can provide an additional period of up to six months to support researchers opting for a placement at the end of the project to work on R&I projects in an organisation from the non-academic sector established in an EU Member State or Horizon Europe Associated Country⁴⁰. While this possibility is also available to fellows recruited in the non-academic sector, such a placement must be implemented at a different non-academic host organisation established in an EU Member State or Horizon Europe Associated Country⁴¹. The request for such a non-academic placement must be an integral part of the proposal, explaining the added-value for the project and for the career development of the researcher, and will be subject to evaluation. This incentive aims at promoting career moves between sectors and organisations and thereby stimulate innovation and knowledge transfer while expanding career opportunities for researchers.

If the placement does not meet the requirements (taking place in an academic organisation or in a Third Country), the proposal will be evaluated without taking into account the placement. This might affect the final score.

Training activities

The training activities implemented under the Postdoctoral Fellowships should include training for key transferable skills, foster innovation and entrepreneurship, (e.g. commercialisation of results, Intellectual Property Rights, communication, public engagement and citizen science), foster good scientific conduct such as research integrity and promote Open Science practices (open access to publications and to other research outputs including data, FAIR data management, societal engagement and citizen science etc.).

Career Development Plan

In order to equip MSCA postdoctoral fellows with skills that enhance and expand their career opportunities inside and outside academia, a Career Development Plan should be established jointly by the supervisor(s) and the researcher. In addition to research objectives, this plan should comprise the researcher's training and career needs, including training on transferable skills, teaching, planning for publications and participation in conferences and events aiming at opening science and research to citizens. The Plan will have to be submitted as a project deliverable at the beginning of the action and can be updated when needed.

Euratom

Aiming to enhance nuclear expertise and excellence as well as synergies between Programmes, organisations active in nuclear research established in one of EU Member States or countries associated to the Euratom Research and Training programme 2021-2025, are eligible to participate⁴². MSCA Postdoctoral Fellowships in this area of research will be supported by the Euratom Research and Training Programme 2021-2025 through an

⁴⁰ For proposals in the research areas covered by the Euratom Research and Training Programme, the organisation from the non-academic sector must be established in an EU Member State or a country associated to the Euratom Research and Training Programme 2021-2025

⁴¹ idem

⁴² See eligibility conditions at the end of this Work Programme part

indicative annual financial contribution of EUR 1 million to the MSCA Postdoctoral Fellowships call⁴³.

ERA Fellowships

The ERA Fellowships implemented through Work Programme Annex 11, Widening Participation and Strengthening the European Research Area, provide specific support to researchers to undertake their fellowship in a widening country⁴⁴. This will help spread excellence and contribute to fostering balanced brain circulation in widening countries.

Call - MSCA Postdoctoral Fellowships 2025

HORIZON-MSCA-2025-PF

Conditions for the Call

Indicative budget(s)⁴⁵

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2025		
Opening: 09 Apr 2025 Deadline(s): 10 Sep 2025				
HORIZON-MSCA-2025-PF-01-01	TMA Postdoctoral Fellowships - European Fellowships	343.65		Not relevant
HORIZON-MSCA-2025-PF-01-01	TMA Postdoctoral Fellowships - Global Fellowships	60.64		Not relevant
Overall indicative budget		404.29		

⁴³ As indicated in the Euratom Work Programme

⁴⁴ These countries are aligned with Work Programme part 11, Widening Participation and Strengthening the European Research Area

⁴⁵ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A. See exceptions and specific conditions at the end of this work programme part.
<i>Eligibility conditions</i>	The general conditions are described in General Annex B. See exceptions and specific conditions at the end of this work programme part.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	For application of the general award criteria, including weighting and thresholds, see the specific conditions at the end of this Work Programme part.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The general procedure is described in General Annex F. See exceptions and specific conditions at the end of this work programme part.
<i>Expected EU contribution per project</i>	The expected EU contribution depends on the number of person-months requested. For the applicable unit contributions, see specific conditions for MSCA at the end of this Work Programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	The general conditions are described in General Annex G. See exceptions and specific conditions at the end of this Work Programme part.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2025-PF-01-01: MSCA Postdoctoral Fellowships 2025

Specific conditions	
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 343.65 million.
<i>Type of Action</i>	TMA Postdoctoral Fellowships - European Fellowships
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 60.64 million.
<i>Type of Action</i>	TMA Postdoctoral Fellowships - Global Fellowships

Expected Outcome: Project results are expected to contribute to the following outcomes:

For supported postdoctoral fellows

- Increased set of research and transferable skills and competences, leading to improved employability and career prospects of MSCA postdoctoral fellows within academia and beyond;
- New mind-sets and approaches to R&I work forged through international, inter-sectoral and interdisciplinary experience;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

For participating organisations

- Increased alignment of working conditions for researchers in accordance with the principles set out in the European Charter for Researchers;
- Enhanced quality and sustainability of research training and supervision;
- Increased global attractiveness, visibility and reputation of the participating organisation(s);
- Stronger R&I capacity and output among participating organisations; better transfer of knowledge;
- Regular feedback of research results into teaching and education at participating organisations.

Scope: Fellowships will be provided to excellent researchers undertaking international mobility. Applications will be made jointly by the researcher and a beneficiary in the academic or non-academic sector.

Postdoctoral Fellowships either can take place in Europe (i.e. in an EU Member State or a Horizon Europe Associated Country) or in a Third Country not associated to Horizon Europe:

- European Postdoctoral Fellowships are open to researchers of any nationality who wish to engage in R&I projects by either coming to Europe from any country in the world or moving within Europe. The standard duration of these fellowships must be between 12 and 24 months.
- Global Postdoctoral Fellowships are open to European nationals or long-term residents⁴⁶ who wish to engage in R&I projects with organisations outside EU Member States and Horizon Europe Associated Countries. These fellowships require an outgoing phase of minimum 12 and maximum 24 months in a non-associated Third Country, and a mandatory 12-month return phase to a host organisation based in an EU Member State or a Horizon Europe Associated Country.

⁴⁶ See eligibility conditions at the end of this Work Programme part.

Specific eligibility conditions apply to MSCA Postdoctoral Fellowships in the research areas covered by the Euratom Research and Training Programme 2021-2025⁴⁷.

Secondments

Researchers receiving a Postdoctoral Fellowship may opt to include a secondment phase, within the overall duration of their fellowship in any country worldwide. The secondment phase can be a single period or be divided into shorter mobility periods.

For European Postdoctoral Fellowships, secondments cannot exceed one third of the requested duration of the action (excluding from the duration of the action any additional period for a non-academic placement) and should be in line with the project objectives, adding significant value and impact to the fellowship.

For Global Postdoctoral Fellowships, optional secondments are permitted for up to one third of the outgoing phase. A maximum of three months of such secondments can be spent at the start of the project at the beneficiary (or associated partners linked to the beneficiary), allowing the researcher to spend time there before going to the associated partner in the Third Country. This period of maximum three months will be considered as part of the outgoing phase.

Secondments cannot take place during the mandatory twelve-month return period to the host organisation in an EU Member State or Horizon Europe Associated Country.

Placements in the non-academic sector

Postdoctoral Fellowships can provide an additional period of up to six months to support researchers opting for a placement at the end of the project to work on R&I projects in an organisation from the non-academic sector established in an EU Member State or Horizon Europe Associated Country⁴⁸. While this possibility is also available to fellows recruited in the non-academic sector, such a placement must be implemented at a different non-academic host organisation established in an EU Member State or Horizon Europe Associated Country⁴⁹. The request for such a non-academic placement must be an integral part of the proposal, explaining the added-value for the project and for the career development of the researcher, and will be subject to evaluation. This incentive aims at promoting career moves between sectors and organisations and thereby stimulate innovation and knowledge transfer while expanding career opportunities for researchers.

If the placement does not meet the requirements (taking place in an academic organisation or in a Third Country), the proposal will be evaluated without taking into account the placement. This might affect the final score.

Training activities

⁴⁷ See eligibility conditions at the end of this Work Programme part.

⁴⁸ For proposals in the research areas covered by the Euratom Research and Training Programme, the organisation from the non-academic sector must be established in an EU Member State or a country associated to the Euratom Research and Training Programme 2021-2025

⁴⁹ idem

The training activities implemented under the Postdoctoral Fellowships should include training for key transferable skills, foster innovation and entrepreneurship, (e.g. commercialisation of results, Intellectual Property Rights, communication, public engagement and citizen science), foster good scientific conduct such as research integrity and promote Open Science practices (open access to publications and to other research outputs including data, FAIR data management, societal engagement and citizen science etc.).

Career Development Plan

In order to equip MSCA postdoctoral fellows with skills that enhance and expand their career opportunities inside and outside academia, a Career Development Plan should be established jointly by the supervisor(s) and the researcher. In addition to research objectives, this plan should comprise the researcher's training and career needs, including training on transferable skills, teaching, planning for publications and participation in conferences and events aiming at opening science and research to citizens. The Plan will have to be submitted as a project deliverable at the beginning of the action and can be updated when needed.

Euratom

Aiming to enhance nuclear expertise and excellence as well as synergies between Programmes, organisations active in nuclear research established in one of EU Member States or countries associated to the Euratom Research and Training programme 2021-2025, are eligible to participate⁵⁰. MSCA Postdoctoral Fellowships in this area of research will be supported by the Euratom Research and Training Programme 2021-2025 through an indicative annual financial contribution of EUR 1 million to the MSCA Postdoctoral Fellowships call⁵¹.

ERA Fellowships

The ERA Fellowships implemented through Work Programme Annex 11, Widening Participation and Strengthening the European Research Area, provide specific support to researchers to undertake their fellowship in a widening country⁵². This will help spread excellence and contribute to fostering balanced brain circulation in widening countries.

⁵⁰ See eligibility conditions at the end of this Work Programme part

⁵¹ As indicated in the Euratom Work Programme

⁵² These countries are aligned with Work Programme part 11, Widening Participation and Strengthening the European Research Area

MSCA Staff Exchanges

MSCA Staff Exchanges promote innovative international, inter-sectoral and interdisciplinary collaboration in research and innovation through exchanging staff and sharing knowledge and ideas at all stages of the innovation chain. The scheme fosters a shared culture of research and innovation that welcomes and rewards creativity and entrepreneurship and helps turn ideas into innovative products, services or processes. It is open to research, technical, administrative and managerial staff supporting R&I activities.

Expected impact

Proposals under this Action should contribute to the following expected impacts:

- Increase international, inter-sectoral and interdisciplinary mobility of research staff within Europe and beyond through collaborative research networks and activities;
- Strengthen the R&I human capital base in Europe and beyond;
- Increase Europe's attractiveness as a leading destination for R&I;
- Contribute to Europe's competitiveness and growth through high-quality R&I;
- Foster the culture of open science, innovation and entrepreneurship.

The following call(s) in this work programme contribute to this Action:

Call	Budgets (EUR million)			Deadline(s)
	2023	2024	2025	
HORIZON-MSCA-2023-SE-01	78.50			28 Feb 2024
HORIZON-MSCA-2024-SE-01		99.47		05 Feb 2025
HORIZON-MSCA-2025-SE-01			97.71	08 Oct 2025
Overall indicative budget	78.50	99.47	97.71	

Call - MSCA Staff Exchanges 2023

HORIZON-MSCA-2023-SE-01

Conditions for the Call

Indicative budget(s)⁵³

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2023		
Opening: 05 Oct 2023 Deadline(s): 28 Feb 2024				
HORIZON-MSCA-2023-SE-01-01	TMA Staff Exchanges	78.50		Not relevant
Overall indicative budget		78.50		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A. See exceptions and specific conditions at the end of this work programme part.
<i>Eligibility conditions</i>	The general conditions are described in General Annex B. See exceptions and specific conditions at the end of this work programme part.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	For application of the general award criteria, including weighting and thresholds, see the specific conditions at the end of this Work Programme part.

⁵³ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The general procedure is described in General Annex F. See exceptions and specific conditions at the end of this work programme part.
<i>Expected EU contribution per project</i>	The expected EU contribution depends on the number of person-months requested. For the applicable unit contributions, see specific conditions for MSCA at the end of this Work Programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	The general conditions are described in General Annex G. See exceptions and specific conditions at the end of this Work Programme part.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2023-SE-01-01: MSCA Staff Exchanges 2023

Expected Outcome: Project results are expected to contribute to the following outcomes:

For staff members

- Increased set of research and transferable skills and competences, leading to improved employability and career prospects within and outside academia;
- More knowledge and innovative ideas converted into products, processes and services;
- More entrepreneurial mind-sets, testing new and innovative ideas;
- Increased international exposure leading to extended networks and opportunities;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

For participating organisations

- Innovative ways of cooperation and transfer of knowledge between sectors and disciplines;
- Strengthened and broader international, inter-sectoral and interdisciplinary collaborative networks;
- Boosted R&I capacity.

Scope: MSCA Staff Exchanges involve organisations from the academic and non-academic sectors (including SMEs) from across the globe.

Support is provided for international, inter-sectoral and interdisciplinary mobility of R&I staff leading to knowledge transfer between participating organisations.

Mobility through secondments

The organisations constituting the partnership contribute directly to the implementation of a joint R&I project by seconding and/or hosting eligible staff members. Such a project must explore activities that can be based on previous work but should go beyond and generate or strengthen long-term collaborations. Secondments must involve physical mobility⁵⁴ of the eligible staff members and must always take place between legal entities independent from each other.

MSCA Staff Exchanges can address three dimensions of mobility: international, inter-sectoral and interdisciplinary⁵⁵. While exchanges between organisations within EU Member States and Horizon Europe Associated Countries should mainly be inter-sectoral, same-sector exchanges⁵⁶ are also possible under the condition that they are interdisciplinary. Interdisciplinarity is not required for same-sector exchanges with non-associated Third Countries.

Secondments between institutions established in non-associated Third Countries or within the same EU Member State or Horizon Europe Associated Country are not eligible.

The collaborative approach of MSCA Staff Exchanges should exploit complementary competences of the participating organisations and create synergies between them. The secondments should be essential to achieve the joint project's R&I activities. The project should *inter alia* enable networking activities and the organisation of workshops and conferences, to facilitate sharing of knowledge and testing of innovative approaches for specific R&I topics.

Skills' development

For participating staff members, the project should offer new skills acquisition and career development perspectives. Participating organisations must ensure that the seconded staff are adequately mentored.

Call - MSCA Staff Exchanges 2024

HORIZON-MSCA-2024-SE-01

⁵⁴ Virtual mobility is not allowed for secondments.

⁵⁵ Interdisciplinarity means the integration of information, data, techniques, tools, perspectives, concepts or theories from two or more scientific disciplines (see definitions at the end of this Work Programme part).

⁵⁶ See specific conditions at the end of this Work Programme part.

Conditions for the Call

Indicative budget(s)⁵⁷

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2024		
Opening: 19 Sep 2024 Deadline(s): 05 Feb 2025				
HORIZON-MSCA-2024-SE-01-01	TMA Exchanges	Staff 99.47		Not relevant
Overall indicative budget		99.47		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A. See exceptions and specific conditions at the end of this work programme part.
<i>Eligibility conditions</i>	The general conditions are described in General Annex B. See exceptions and specific conditions at the end of this work programme part.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	For application of the general award criteria, including weighting and thresholds, see the specific conditions at the end of this Work Programme part.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The general procedure is described in General Annex F. See exceptions and specific conditions at the end of this work programme part.

⁵⁷

The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

<i>Expected EU contribution per project</i>	The expected EU contribution depends on the number of person-months requested. For the applicable unit contributions, see specific conditions for MSCA at the end of this Work Programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	The general conditions are described in General Annex G. See exceptions and specific conditions at the end of this Work Programme part.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2024-SE-01-01: MSCA Staff Exchanges 2024

Expected Outcome: Project results are expected to contribute to the following outcomes:

For staff members

- Increased set of research and transferable skills and competences, leading to improved employability and career prospects within and outside academia;
- More knowledge and innovative ideas converted into products, processes and services;
- More entrepreneurial mind-sets, testing new and innovative ideas;
- Increased international exposure leading to extended networks and opportunities;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

For participating organisations

- Innovative ways of cooperation and transfer of knowledge between sectors and disciplines;
- Strengthened and broader international, inter-sectoral and interdisciplinary collaborative networks;
- Boosted R&I capacity.

Scope: MSCA Staff Exchanges involve organisations from the academic and non-academic sectors (including SMEs) from across the globe.

Support is provided for international, inter-sectoral and interdisciplinary mobility of R&I staff leading to knowledge transfer between participating organisations.

Mobility through secondments

The organisations constituting the partnership contribute directly to the implementation of a joint R&I project by seconding and/or hosting eligible staff members. Such a project must explore activities that can be based on previous work but should go beyond and generate or strengthen long-term collaborations. Secondments must involve physical mobility⁵⁸ of the eligible staff members and must always take place between legal entities independent from each other.

MSCA Staff Exchanges can address three dimensions of mobility: international, inter-sectoral and interdisciplinary⁵⁹. While exchanges between organisations within EU Member States and Horizon Europe Associated Countries should mainly be inter-sectoral, same-sector exchanges⁶⁰ are also possible under the condition that they are interdisciplinary. Interdisciplinarity is not required for same-sector exchanges with non-associated Third Countries.

Secondments between institutions established in non-associated Third Countries or within the same EU Member State or Horizon Europe Associated Country are not eligible.

The collaborative approach of MSCA Staff Exchanges should exploit complementary competences of the participating organisations and create synergies between them. The secondments should be essential to achieve the joint project's R&I activities. The project should *inter alia* enable networking activities and the organisation of workshops and conferences, to facilitate sharing of knowledge and testing of innovative approaches for specific R&I topics.

Skills' development

For participating staff members, the project should offer new skills acquisition and career development perspectives. Participating organisations must ensure that the seconded staff are adequately mentored.

Call - MSCA Staff Exchanges 2025

HORIZON-MSCA-2025-SE-01

Conditions for the Call

Indicative budget(s)⁶¹

⁵⁸ Virtual mobility is not allowed for secondments.

⁵⁹ Interdisciplinarity means the integration of information, data, techniques, tools, perspectives, concepts or theories from two or more scientific disciplines (see definitions at the end of this Work Programme part).

⁶⁰ See specific conditions at the end of this Work Programme part.

⁶¹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2025		
Opening: 27 Mar 2025 Deadline(s): 08 Oct 2025				
HORIZON-MSCA-2025-SE-01-01	TMA Staff Exchanges	97.71		Not relevant
Overall indicative budget		97.71		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A. See exceptions and specific conditions at the end of this work programme part.
<i>Eligibility conditions</i>	The general conditions are described in General Annex B. See exceptions and specific conditions at the end of this work programme part.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	For application of the general award criteria, including weighting and thresholds, see the specific conditions at the end of this Work Programme part.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The general procedure is described in General Annex F. See exceptions and specific conditions at the end of this work programme part.
<i>Expected EU contribution per project</i>	The expected EU contribution depends on the number of person-months requested. For the applicable unit contributions, see specific conditions for MSCA at the end of this Work Programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	The general conditions are described in General Annex G. See exceptions and specific conditions at the end of this Work Programme part.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2025-SE-01-01: MSCA Staff Exchanges 2025

Expected Outcome: Project results are expected to contribute to the following outcomes:

For staff members

- Increased set of research and transferable skills and competences, leading to improved employability and career prospects within and outside academia;
- More knowledge and innovative ideas converted into products, processes and services;
- More entrepreneurial mind-sets, testing new and innovative ideas;
- Increased international exposure leading to extended networks and opportunities;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

For participating organisations

- Innovative ways of cooperation and transfer of knowledge between sectors and disciplines;
- Strengthened and broader international, inter-sectoral and interdisciplinary collaborative networks;
- Boosted R&I capacity.

Scope: MSCA Staff Exchanges involve organisations from the academic and non-academic sectors (including SMEs) from across the globe.

Support is provided for international, inter-sectoral and interdisciplinary mobility of R&I staff leading to knowledge transfer between participating organisations.

Mobility through secondments

The organisations constituting the partnership contribute directly to the implementation of a joint R&I project by seconding and/or hosting eligible staff members. Such a project must explore activities that can be based on previous work but should go beyond and generate or strengthen long-term collaborations. Secondments must involve physical mobility⁶² of the eligible staff members and must always take place between legal entities independent from each other.

⁶² Virtual mobility is not allowed for secondments.

MSCA Staff Exchanges can address three dimensions of mobility: international, inter-sectoral and interdisciplinary⁶³. While exchanges between organisations within EU Member States and Horizon Europe Associated Countries should mainly be inter-sectoral, same-sector exchanges⁶⁴ are also possible under the condition that they are interdisciplinary. Interdisciplinarity is not required for same-sector exchanges with non-associated Third Countries.

Secondments between institutions established in non-associated Third Countries or within the same EU Member State or Horizon Europe Associated Country are not eligible.

The collaborative approach of MSCA Staff Exchanges should exploit complementary competences of the participating organisations and create synergies between them. The secondments should be essential to achieve the joint project's R&I activities. The project should *inter alia* enable networking activities and the organisation of workshops and conferences, to facilitate sharing of knowledge and testing of innovative approaches for specific R&I topics.

Skills' development

For participating staff members, the project should offer new skills acquisition and career development perspectives. Participating organisations must ensure that the seconded staff are adequately mentored.

⁶³ Interdisciplinarity means the integration of information, data, techniques, tools, perspectives, concepts or theories from two or more scientific disciplines (see definitions at the end of this Work Programme part).

⁶⁴ See specific conditions at the end of this Work Programme part.

MSCA Co-funding of regional, national and international programmes

MSCA COFUND co-finances new or existing doctoral programmes and postdoctoral fellowship schemes with the aim of spreading the best practices of the MSCA including international, inter-sectoral and interdisciplinary research training, as well as international and cross-sectoral mobility of researchers at all stages of their career.

In practice, MSCA COFUND provides complementary funding for doctoral or postdoctoral programmes managed by entities established in EU Member States or Horizon Europe Associated Countries. Those co-funded programmes must follow MSCA's good practice in terms of international recruitment and minimum standard of employment for the recruited fellows as described in the European Charter for Researchers.

Expected impact

Proposals under this Action should contribute to the following expected impacts:

- Enhance talent and knowledge circulation across the R&I landscape, through international, inter-sectoral and interdisciplinary mobility, including by supporting regional or national smart specialisation strategies when appropriate;
- Align practices with MSCA policies based on the European Charter for Researchers;
- Improve the attractiveness of researchers' careers notably through better working and employment conditions;
- Strengthen Europe's human capital base in R&I by training highly-skilled researchers;
- Increase Europe's attractiveness as a leading R&I destination;
- Enhance the quality of R&I contributing to Europe's sustainable competitiveness;
- Establish sustainable collaboration between academic and non-academic organisations;
- Foster the culture of open science, innovation and entrepreneurship.

The following call(s) in this work programme contribute to this Action:

Call	Budgets (EUR million)			Deadline(s)
	2023	2024	2025	
HORIZON- MSCA-2023- COFUND-01	96.57			08 Feb 2024
HORIZON- MSCA-2024-		104.80		26 Sep 2024

COFUND-01				
HORIZON- MSCA-2025- COFUND-01			105.56	24 Jun 2025
HORIZON- MSCA-2025- COFUND-02			22.50	03 Dec 2025
Overall indicative budget	96.57	104.80	128.06	

Call - MSCA COFUND 2023

HORIZON-MSCA-2023-COFUND-01

Conditions for the Call

Indicative budget(s)⁶⁵

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2023		
Opening: 10 Oct 2023 Deadline(s): 08 Feb 2024				
HORIZON-MSCA-2023-COFUND-01-01	TMA-Cofund-Doctoral	96.57		Not relevant
HORIZON-MSCA-2023-COFUND-01-01	TMA-Cofund-Postdoctoral			Not relevant
Overall indicative budget		96.57		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A. See exceptions and specific conditions at the end of this work programme part.
<i>Eligibility conditions</i>	The general conditions are described in General Annex B. See exceptions and specific conditions at the end of this work programme part.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	For application of the general award criteria, including weighting

⁶⁵ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

	and thresholds, see the specific conditions at the end of this Work Programme part.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The general procedure is described in General Annex F. See exceptions and specific conditions at the end of this work programme part.
<i>Expected EU contribution per project</i>	The expected EU contribution depends on the number of person-months requested. For the applicable unit contributions, see specific conditions for MSCA at the end of this Work Programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	The general conditions are described in General Annex G. See exceptions and specific conditions at the end of this Work Programme part.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2023-COFUND-01-01: MSCA COFUND 2023

Expected Outcome: Projects results are expected to contribute to the following outcomes:

For supported doctoral candidates or postdoctoral researchers

- Deeper and more diverse set of research-related and transferable skills and competences;
- Improved employability and career prospects both within academia and beyond;
- New mind-sets and approaches to R&I work forged through international, inter-sectoral and interdisciplinary experience;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

For participating organisations

- Enhanced quality and sustainability of research training;
- Increased global attractiveness, visibility and reputation of the participating organisation(s);
- Stronger R&I capacity and output among participating organisations;
- Increased contribution of the participating organisations to the local, regional and/or national socio-economic ecosystems;

- Regular feedback of research results into teaching and education at participating organisations.

Scope: Applicants submit proposals for new or existing doctoral or postdoctoral programmes with an impact on the enhancement of human resources in R&I at regional, national or international level. These programmes will be co-funded by MSCA COFUND.

Proposed programmes can cover any research disciplines ("bottom-up"), but exceptionally can also focus on specific disciplines, notably when they are based on national or regional Research and Innovation Strategies for Smart Specialisation (RIS3 strategies). In this case, the range of covered disciplines should allow reasonable flexibility for the researchers to define their topic.

Funding synergies with Cohesion policy funds and the Recovery and Resilience Facility (RRF) are strongly encouraged^{66,67}.

A Career Development Plan must be jointly established by the supervisor and each recruited researcher upon recruitment. In addition to research objectives, this Plan comprises the researcher's training and career needs, including training on transferable skills, teaching, planning for publications and participation in conferences and events aimed at opening science and research to citizens. The Plan must be established at the beginning of the recruitment and should be revised (and updated where needed) within 18 months.

COFUND takes the form of:

A) Doctoral programmes

Doctoral programmes offer research training activities to allow doctoral candidates to develop and broaden their skills and competences. They will lead to the award of a doctoral degree in at least one EU Member State or Horizon Europe Associated Country. The training activities should be based on the [EU Principles on Innovative Doctoral Training](#).

Substantial training modules, including digital ones, addressing key transferable skills and competences common to all fields, fostering good scientific conduct such as research integrity, and fostering the culture of Open Science, innovation and entrepreneurship will be supported. They will include, *inter alia*, training on the use of collaborative tools and approaches, opening access to publications and to other research outputs including data, FAIR data management, societal engagement and citizen science.

On top of compulsory international mobility, applicants are encouraged to include elements of cross-sectoral mobility and interdisciplinarity into their programmes. Collaboration with a wider set of associated partners, including from the non-academic sector, will be positively

⁶⁶ <https://ec.europa.eu/research/regions/index.cfm?pg=synergies>

⁶⁷ The Recovery and Resilience Facility supports reforms and investments undertaken by Member States. The aim is to mitigate the economic and social impact of the coronavirus pandemic and make European economies and societies more sustainable, resilient and better prepared for the challenges and opportunities of the green and digital transitions.

taken into account during the evaluation. These organisations may provide hosting or secondment opportunities or training modules in research or transferable skills.

Particular attention is paid to the quality of supervision and mentoring arrangements as well as career guidance. The selection procedure for doctoral candidates must be open, transparent and merit-based, in line with the Code of Conduct for the Recruitment of Researchers. The vacancy notice (to be widely advertised internationally, including on the EURAXESS⁶⁸ website) must mention if the published rates include all employer and employee's taxes and contributions. If possible, the gross salary (net salary + employee's taxes and contributions) should be published.

B) Postdoctoral Programmes

Postdoctoral Programmes fund individual advanced research training and career development fellowships for postdoctoral researchers. The programmes should offer training to develop key transferable skills and competences common to all fields, foster good scientific conduct such as research integrity, foster innovation and entrepreneurship and promote and (where appropriate) reward Open Science practices (open access to publications and to other research outputs including data, FAIR data management, societal engagement and citizen science, etc.).

Postdoctoral Programmes should have regular selection rounds following fixed deadlines or regular cut-off dates, allowing fair competition between researchers. The selection procedure for postdoctoral candidates must be open, competitive, merit-based and with a transparent international peer review, in line with the Code of Conduct for the Recruitment of Researchers. The vacancy notice (to be widely advertised internationally, including on the EURAXESS website) must mention if the published rates include all employer and employee's taxes and contributions. If possible, the gross salary (net salary + employee's taxes and contributions) should be published.

On top of compulsory international mobility, applicants are encouraged to include elements of cross-sectoral mobility and interdisciplinarity into their programmes. Researchers will be able to freely choose a research topic and the appropriate organisation to host them, fitting their individual needs.

Call - MSCA COFUND 2024

HORIZON-MSCA-2024-COFUND-01

Conditions for the Call

Indicative budget(s)⁶⁹

⁶⁸ <https://euraxess.ec.europa.eu/>

⁶⁹ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2024		
Opening: 23 Apr 2024 Deadline(s): 26 Sep 2024				
HORIZON-MSCA-2024-COFUND-01-01	TMA-Cofund-Doctoral	104.80		Not relevant
HORIZON-MSCA-2024-COFUND-01-01	TMA-Cofund-Postdoctoral			Not relevant
Overall indicative budget		104.80		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A. See exceptions and specific conditions at the end of this work programme part.
<i>Eligibility conditions</i>	The general conditions are described in General Annex B. See exceptions and specific conditions at the end of this work programme part.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	For application of the general award criteria, including weighting and thresholds, see the specific conditions at the end of this Work Programme part.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The general procedure is described in General Annex F. See exceptions and specific conditions at the end of this work programme part.
<i>Expected EU contribution per project</i>	The expected EU contribution depends on the number of person-months requested. For the applicable unit contributions, see specific conditions for MSCA at the end of this Work Programme

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

	part.
<i>Legal and financial set-up of the Grant Agreements</i>	The general conditions are described in General Annex G. See exceptions and specific conditions at the end of this Work Programme part.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2024-COFUND-01-01: MSCA COFUND 2024

Expected Outcome: Projects results are expected to contribute to the following outcomes:

For supported doctoral candidates or postdoctoral researchers

- Deeper and more diverse set of research-related and transferable skills and competences;
- Improved employability and career prospects both within academia and beyond;
- New mind-sets and approaches to R&I work forged through international, inter-sectoral and interdisciplinary experience;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

For participating organisations

- Enhanced quality and sustainability of research training;
- Increased global attractiveness, visibility and reputation of the participating organisation(s);
- Stronger R&I capacity and output among participating organisations;
- Increased contribution of the participating organisations to the local, regional and/or national socio-economic ecosystems;
- Regular feedback of research results into teaching and education at participating organisations.

Scope: Applicants submit proposals for new or existing doctoral or postdoctoral programmes with an impact on the enhancement of human resources in R&I at regional, national or international level. These programmes will be co-funded by MSCA COFUND.

Proposed programmes can cover any research disciplines ("bottom-up"), but exceptionally can also focus on specific disciplines, notably when they are based on national or regional Research and Innovation Strategies for Smart Specialisation (RIS3 strategies). In this case, the range of covered disciplines should allow reasonable flexibility for the researchers to define their topic.

Funding synergies with Cohesion policy funds and the Recovery and Resilience Facility (RRF) are strongly encouraged^{70,71}.

A Career Development Plan must be jointly established by the supervisor and each recruited researcher upon recruitment. In addition to research objectives, this Plan comprises the researcher's training and career needs, including training on transferable skills, teaching, planning for publications and participation in conferences and events aimed at opening science and research to citizens. The Plan must be established at the beginning of the recruitment and should be revised (and updated where needed) within 18 months.

COFUND takes the form of:

A) Doctoral programmes

Doctoral programmes offer research training activities to allow doctoral candidates to develop and broaden their skills and competences. They will lead to the award of a doctoral degree in at least one EU Member State or Horizon Europe Associated Country. The training activities should be based on the [EU Principles on Innovative Doctoral Training](#).

Substantial training modules, including digital ones, addressing key transferable skills and competences common to all fields, fostering good scientific conduct such as research integrity, and fostering the culture of Open Science, innovation and entrepreneurship will be supported. They will include, *inter alia*, training on the use of collaborative tools and approaches, opening access to publications and to other research outputs including data, FAIR data management, societal engagement and citizen science.

On top of compulsory international mobility, applicants are encouraged to include elements of cross-sectoral mobility and interdisciplinarity into their programmes. Collaboration with a wider set of associated partners, including from the non-academic sector, will be positively taken into account during the evaluation. These organisations may provide hosting or secondment opportunities or training modules in research or transferable skills.

Particular attention is paid to the quality of supervision and mentoring arrangements as well as career guidance. The selection procedure for doctoral candidates must be open, transparent and merit-based, in line with the Code of Conduct for the Recruitment of Researchers. The vacancy notice (to be widely advertised internationally, including on the EURAXESS⁷² website) must mention if the published rates include all employer and employee's taxes and contributions. If possible, the gross salary (net salary + employee's taxes and contributions) should be published.

B) Postdoctoral Programmes

⁷⁰ <https://ec.europa.eu/research/regions/index.cfm?pg=synergies>

⁷¹ The Recovery and Resilience Facility supports reforms and investments undertaken by Member States. The aim is to mitigate the economic and social impact of the coronavirus pandemic and make European economies and societies more sustainable, resilient and better prepared for the challenges and opportunities of the green and digital transitions.

⁷² <https://euraxess.ec.europa.eu/>

Postdoctoral Programmes fund individual advanced research training and career development fellowships for postdoctoral researchers. The programmes should offer training to develop key transferable skills and competences common to all fields, foster good scientific conduct such as research integrity, foster innovation and entrepreneurship and promote and (where appropriate) reward Open Science practices (open access to publications and to other research outputs including data, FAIR data management, societal engagement and citizen science, etc.).

Postdoctoral Programmes should have regular selection rounds following fixed deadlines or regular cut-off dates, allowing fair competition between researchers. The selection procedure for postdoctoral candidates must be open, competitive, merit-based and with a transparent international peer review, in line with the Code of Conduct for the Recruitment of Researchers. The vacancy notice (to be widely advertised internationally, including on the EURAXESS website) must mention if the published rates include all employer and employee's taxes and contributions. If possible, the gross salary (net salary + employee's taxes and contributions) should be published.

On top of compulsory international mobility, applicants are encouraged to include elements of cross-sectoral mobility and interdisciplinarity into their programmes. Researchers will be able to freely choose a research topic and the appropriate organisation to host them, fitting their individual needs.

Call - MSCA COFUND 2025

HORIZON-MSCA-2025-COFUND-01

Conditions for the Call

Indicative budget(s)⁷³

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2025		
Opening: 23 Jan 2025				
Deadline(s): 24 Jun 2025				

⁷³ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

HORIZON-MSCA-2025-COFUND-01-01	TMA-Cofund-Doctoral	105.56		Not relevant
HORIZON-MSCA-2025-COFUND-01-01	TMA-Cofund-Postdoctoral			Not relevant
Overall indicative budget		105.56		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A. See exceptions and specific conditions at the end of this work programme part.
<i>Eligibility conditions</i>	The general conditions are described in General Annex B. See exceptions and specific conditions at the end of this work programme part.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	For application of the general award criteria, including weighting and thresholds, see the specific conditions at the end of this Work Programme part.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The general procedure is described in General Annex F. See exceptions and specific conditions at the end of this work programme part.
<i>Expected EU contribution per project</i>	The expected EU contribution depends on the number of person-months requested. For the applicable unit contributions, see specific conditions for MSCA at the end of this Work Programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	The general conditions are described in General Annex G. See exceptions and specific conditions at the end of this Work Programme part.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2025-COFUND-01-01: MSCA COFUND 2025

Expected Outcome: Projects results are expected to contribute to the following outcomes:

For supported doctoral candidates or postdoctoral researchers

- Deeper and more diverse set of research-related and transferable skills and competences;
- Improved employability and career prospects both within academia and beyond;
- New mind-sets and approaches to R&I work forged through international, inter-sectoral and interdisciplinary experience;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

For participating organisations

- Enhanced quality and sustainability of research training;
- Increased global attractiveness, visibility and reputation of the participating organisation(s);
- Stronger R&I capacity and output among participating organisations;
- Increased contribution of the participating organisations to the local, regional and/or national socio-economic ecosystems;
- Regular feedback of research results into teaching and education at participating organisations.

Scope: Applicants submit proposals for new or existing doctoral or postdoctoral programmes with an impact on the enhancement of human resources in R&I at regional, national or international level. These programmes will be co-funded by MSCA COFUND.

Proposed programmes can cover any research disciplines ("bottom-up"), but exceptionally can also focus on specific disciplines, notably when they are based on national or regional Research and Innovation Strategies for Smart Specialisation (RIS3 strategies). In this case, the range of covered disciplines should allow reasonable flexibility for the researchers to define their topic.

Funding synergies with Cohesion policy funds and the Recovery and Resilience Facility (RRF) are strongly encouraged^{74,75}.

A Career Development Plan must be jointly established by the supervisor and each recruited researcher upon recruitment. In addition to research objectives, this Plan comprises the researcher's training and career needs, including training on transferable skills, teaching, planning for publications and participation in conferences and events aimed at opening

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<https://ec.europa.eu/research/regions/index.cfm?pg=synergies>

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The Recovery and Resilience Facility supports reforms and investments undertaken by Member States. The aim is to mitigate the economic and social impact of the coronavirus pandemic and make European economies and societies more sustainable, resilient and better prepared for the challenges and opportunities of the green and digital transitions.

science and research to citizens. The Plan must be established at the beginning of the recruitment and should be revised (and updated where needed) within 18 months.

COFUND takes the form of:

A) Doctoral programmes

Doctoral programmes offer research training activities to allow doctoral candidates to develop and broaden their skills and competences. They will lead to the award of a doctoral degree in at least one EU Member State or Horizon Europe Associated Country. The training activities should be based on the [EU Principles on Innovative Doctoral Training](#).

Substantial training modules, including digital ones, addressing key transferable skills and competences common to all fields, fostering good scientific conduct such as research integrity, and fostering the culture of Open Science, innovation and entrepreneurship will be supported. They will include, *inter alia*, training on the use of collaborative tools and approaches, opening access to publications and to other research outputs including data, FAIR data management, societal engagement and citizen science.

On top of compulsory international mobility, applicants are encouraged to include elements of cross-sectoral mobility and interdisciplinarity into their programmes. Collaboration with a wider set of associated partners, including from the non-academic sector, will be positively taken into account during the evaluation. These organisations may provide hosting or secondment opportunities or training modules in research or transferable skills.

Particular attention is paid to the quality of supervision and mentoring arrangements as well as career guidance. The selection procedure for doctoral candidates must be open, transparent and merit-based, in line with the Code of Conduct for the Recruitment of Researchers. The vacancy notice (to be widely advertised internationally, including on the EURAXESS⁷⁶ website) must mention if the published rates include all employer and employee's taxes and contributions. If possible, the gross salary (net salary + employee's taxes and contributions) should be published.

B) Postdoctoral Programmes

Postdoctoral Programmes fund individual advanced research training and career development fellowships for postdoctoral researchers. The programmes should offer training to develop key transferable skills and competences common to all fields, foster good scientific conduct such as research integrity, foster innovation and entrepreneurship and promote and (where appropriate) reward Open Science practices (open access to publications and to other research outputs including data, FAIR data management, societal engagement and citizen science, etc.).

Postdoctoral Programmes should have regular selection rounds following fixed deadlines or regular cut-off dates, allowing fair competition between researchers. The selection procedure

⁷⁶ <https://euraxess.ec.europa.eu/>

for postdoctoral candidates must be open, competitive, merit-based and with a transparent international peer review, in line with the Code of Conduct for the Recruitment of Researchers. The vacancy notice (to be widely advertised internationally, including on the EURAXESS website) must mention if the published rates include all employer and employee's taxes and contributions. If possible, the gross salary (net salary + employee's taxes and contributions) should be published.

On top of compulsory international mobility, applicants are encouraged to include elements of cross-sectoral mobility and interdisciplinarity into their programmes. Researchers will be able to freely choose a research topic and the appropriate organisation to host them, fitting their individual needs.

Call - MSCA Choose Europe 2025

HORIZON-MSCA-2025-COFUND-02

Conditions for the Call

Indicative budget(s)⁷⁷

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2025		
Opening: 01 Oct 2025 Deadline(s): 03 Dec 2025				
HORIZON-MSCA-2025-COFUND-02-01	TMA-Cofund-Postdoctoral	22.50		Not relevant
Overall indicative budget		22.50		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A. See exceptions and specific conditions at the end of this work programme part.
<i>Eligibility conditions</i>	The general conditions are described in General Annex B. See

⁷⁷ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

	exceptions and specific conditions at the end of this work programme part.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	For application of the general award criteria, including weighting and thresholds, see the specific conditions at the end of this Work Programme part.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The general procedure is described in General Annex F. See exceptions and specific conditions at the end of this work programme part.
<i>Expected EU contribution per project</i>	The expected EU contribution depends on the number of person-months requested. For the applicable unit contributions, see specific conditions for MSCA at the end of this Work Programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	The general conditions are described in General Annex G. See exceptions and specific conditions at the end of this Work Programme part.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2025-COFUND-02-01: MSCA Choose Europe 2025

Expected Outcome:

For supported researchers:

- Concrete career prospects and increased career stability
- Access to diverse career pathways in and outside academia
- Deeper and more diverse set of research-related, academic and transferable skills and competences, leading to greater autonomy

For participating organisations:

- Better alignment of research and Human Resources practices, including recruitment, career accession and progression systems, at participating organisation(s) with the European Charter for Researchers and the Council Recommendation of 18 December 2023 on a European framework to attract and retain research, innovation and

entrepreneurial talents in Europe and the Agreement on Reforming Research Assessment;

- Increased global attractiveness, visibility and reputation of the participating organisation(s);
- Stronger R&I and teaching capacity and output;
- Increased contribution to the local, regional and/or national socio-economic ecosystems;
- Stronger synergies across institutional research, management and teaching structures.

Scope: The objective of this new scheme is to tackle brain drain and precarity of researchers' careers to make Europe more attractive to the most promising young talents. Applicants submit proposals for talent recruitment programmes that will provide researchers holding a doctoral degree with excellent research and academic opportunities, potentially coupled with management activities, to lead them to concrete and attractive career prospects. This will have an impact on the enhancement of human resources in R&I at institutional, regional, national or international level. These programmes will be co-funded by MSCA Choose Europe.

The programmes will be divided into two phases. A first phase (24-36 months) in which the EU funding is equivalent to the minimum gross salary for the recruited researcher during this phase and a second phase (24 months) in which the applicant is expected to continue to employ the researcher, set salaries attractive at a national level and ensure availability of the necessary internal or external funds.

Proposed programmes can cover any research disciplines. The selection procedure for candidates must be open, competitive, merit-based and with a transparent international peer-review in line with the European Charter for Researchers⁷⁸. Alignment with the principles outlined in the Agreement on Reforming Research Assessment⁷⁹ is also encouraged. Selection criteria should be based primarily on excellence. Additional selection criteria require clear alignment with local human resources needs identified in the relevant institutional, regional or national strategies. These must be described in the proposal and must be listed in the vacancy notice (to be widely advertised internationally, including on the EURAXESS website⁸⁰) alongside the gross salaries applicable to the two programme phases (net salary + employee's taxes and contributions). Selected fellows will be able to work in research, teaching or management positions and, where relevant, define their own research topic at their host institution(s). The programmes should aim at offering excellent working conditions to researchers, including salary, professional resources, and career development.

The career development should incorporate transversal skills but also job-specific skills and, where relevant, language courses to ensure that the training is in line with the career opportunities offered following the fellowship. These opportunities must include concrete and

⁷⁸ [Council Recommendation of 18 December 2023 on a European framework to attract and retain research, innovation and entrepreneurial talents in Europe](#)

⁷⁹ [agreement_final.pdf \(coara.eu\)](#)

⁸⁰ [EURAXESS](#)

attractive long-term career prospects, such as pathways towards open-ended contracts, which can be subject to assessment and evaluation. There must be a fair, equal, inclusive, transparent, structured career accession and progression system providing access to these opportunities in line with the Council Recommendation of 18 December 2023 on a European framework to attract and retain research, innovation and entrepreneurial talents in Europe, the European Charter for Researchers in its annex and the Agreement on Reforming Research Assessment.

A Career Development Plan must be maintained throughout the period of the Choose Europe programme. In addition to research objectives, this Plan comprises the researcher's career development needs, including training on languages, transferable skills, teaching, planning for publications and participation in conferences and events. The Plan should outline the projected career progression paths in the host institution.

MSCA and Citizens

MSCA and Citizens⁸¹ aims to bring research and researchers closer to the public at large, to increase awareness of research and innovation activities and to boost public recognition of science and research education. It will show the role of the researcher for the society and economy, as well as the impact of researchers' work on citizens' daily lives. It also aims to raise the interest of young people in research and scientific careers.

MSCA and Citizens will address the general public, attracting people regardless of the level of their scientific background, with a specific focus on families, pupils, students, and notably those who do not have easy access to, and thus are less inclined to engage in, STEAM fields (science, technology, engineering, arts and mathematics) or research activities. Inclusiveness should be key, in view of broadening access to science and research to all.

MSCA and Citizens should also promote gender balance and inclusiveness in science, Open Science, and Responsible Research and Innovation.

These objectives will be pursued through the organisation of the European Researchers' Night and the implementation of the Researchers at Schools initiative.

The European Researchers' Night is the largest research communication and promotion event taking place across EU Member States and Horizon Europe Associated Countries. A wide geographic coverage that reflects the European nature of this initiative is key.

The Researchers at Schools initiative aims to strengthen the connection between research and education. It brings school classes to research facilities and researchers to schools or other pedagogical and educational centres, encouraging interaction with pupils at all levels of education. Researchers and pupils will meet to talk about current and future challenges of our societies and the related key role of research. Pupils will learn directly about research projects and activities addressing the EU priorities and main orientations.

Expected impact

Proposals under this Action should contribute to the following expected impacts:

- Enhance engagement with citizens on R&I;
- Increase awareness among the general public of the importance and benefits of R&I, especially EU-funded research, and its concrete impact on citizens' daily life;
- Contribute to the diffusion and the promotion of excellence research projects across Europe and beyond by reaching citizens in as many participating countries as possible;

⁸¹ The below objectives and expected impact apply to the HORIZON-MSCA-2025-CITIZENS-01 Call only, and have been revised from those that applied to the HORIZON-MSCA-2023-CITIZENS-01 Call, see the initial MSCA Work Programme part 2023-2024 adopted by the European Commission Decision C(2022)7550 of 6 December 2022

- Raise the interest of young people in science and research careers;

Support school teachers and educators in developing a scientific approach around priority topics and creating a learning opportunity for pupils through a direct interaction with researchers.

The following call(s) in this work programme contribute to this Action:

Call	Budgets (EUR million)		Deadline(s)
	2023	2025	
HORIZON-MSCA-2023-CITIZENS-01	15.42		25 Oct 2023
HORIZON-MSCA-2025-CITIZENS-01		16.25	22 Oct 2025
Overall indicative budget	15.42	16.25	

Call - MSCA and Citizens 2023

HORIZON-MSCA-2023-CITIZENS-01

Conditions for the Call

Indicative budget(s)⁸²

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁸³	Indicative number of projects expected to be funded
		2023		
Opening: 20 Jun 2023 Deadline(s): 25 Oct 2023				
HORIZON-MSCA-2023-CITIZENS-01-01	CSA	15.42	0.10 to 0.30	50
Overall indicative budget		15.42		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General

⁸² The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

⁸³ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

	Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2023-CITIZENS-01-01: European Researchers' Night and Researchers at Schools 2024-2025

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 0.10 and 0.30 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.42 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome: Project results are expected to contribute to the following outcomes:

For researchers

- Enhanced opportunities to interact with citizens and local, regional and national authorities;
- Improved communication skills and competences to interact with a non-research audience, notably with pupils and students.

For organisations

- Increased reputation and visibility of participating organisations in terms of hosting excellence research projects towards the general public and possible future students;
- Researchers' work made more tangible, concrete, accessible, and thus opening research and science to all;
- Improved outreach to all audiences, and notably those who do not have an easy access to science and research activities;
- Better communication of R&I results and activities to society, increased and strengthened opportunities for citizens' engagement.

Scope: Proposals should cover both the organisation of the European Researchers' Night and the implementation of the Researchers at Schools initiative.

The European Researchers' Night takes place every year, on the last Friday of September⁸⁴. It supports events that can last up to two days: they can start on Friday and continue the following day. Pre-events, prior to the main event, and related post-events, such as wrap-up meetings or small-scale follow-up events, can also be organised. It is the occasion for a Europe-wide public and media event for the promotion of research careers.

The European Researchers' Night targets the general public, addressing and attracting people regardless of the level of their scientific background, with a special focus on young people and their families, pupils and students, and notably those who do not have easy access to, and thus are less inclined to engage in STEAM fields (science, technology, engineering, arts and mathematics) or research activities.

The Researchers at Schools initiative brings researchers to schools and other pedagogical and educational centres to interact with pupils on societal challenges and on the key role of research to address them. Pupils will thus also learn directly about research projects and initiatives related to EU main priorities.

Types of activities

European Researchers' Night activities can combine education with entertainment, especially when addressing young audiences. They can take various forms, such as exhibitions, hands-on experiments, science shows, simulations, debates, games, competitions, quizzes, etc. Where appropriate, engagement with educational institutions should be sought in order to encourage formal and informal science education with the aim of improving the scientific knowledge base. The European Researchers' Night should be highlighted as a European (and Europe-wide) event, and each proposal should promote the European Union and its impact on citizens' daily life in the most appropriate way, according to the set-up and the configuration of the event, its location and its activities.

Researchers at Schools activities will allow researchers to showcase their work and interact with pupils. Researchers will engage with teachers, educators and pupils on challenges related to climate change, sustainable development, health and other issues related to the European Commission priorities and main orientations, such as the European Green Deal or the EU Missions. The Researchers at Schools activities should take place at any time during the project duration and should be subject to a dedicated promotion, particularly towards schools and other pedagogical and educational centres.

Involvement of researchers funded by Horizon Europe or previous Framework Programmes, notably by the Marie Skłodowska-Curie Actions, is highly encouraged.

⁸⁴ Except for countries which for strong cultural reasons would be prevented from organising any action addressing the public at large on such a date.

Both the European Researchers' Night and Researchers at Schools initiative should promote gender balance, diversity and inclusiveness in science in terms of planned activities and researchers involved.

The European Commission has defined priorities, notably through the EU Missions, which aim to tackle challenges faced by our societies. Applicants are encouraged to focus on, and include activities relating to these priorities identified by the Missions in their events.

Partnerships and coordination at regional, national or cross-border levels will be strongly encouraged aiming at a good geographical spread and avoiding overlaps. Activities carried-out in non-associated third countries are not eligible for funding.

High-quality applications not retained due to lack of funding may be granted the status of associated events.

Eligible costs will take the form of lump sum contributions as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme.

Applicants are encouraged to submit proposals covering activities for both 2024 and 2025, including the organisation of two successive editions⁸⁵ (2024 and 2025) of the European Researchers' Night and implementation of Researchers at Schools activities during the project duration.

Call - MSCA and Citizens 2025

HORIZON-MSCA-2025-CITIZENS-01

Conditions for the Call

Indicative budget(s)⁸⁶

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁸⁷	Indicative number of projects expected to be
		2025		

⁸⁵ The expected contribution for projects covering two editions of the European Researchers' Night and Researchers at Schools activities is between EUR 0.1 and 0.3 million, but this does not preclude submission and selection of proposals requesting different amounts.

⁸⁶ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

⁸⁷ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

				funded
Opening: 17 Jun 2025 Deadline(s): 22 Oct 2025				
HORIZON-MSCA-2025-CITIZENS-01-01	CSA	16.25	0.10 to 0.35	50
Overall indicative budget		16.25		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2025-CITIZENS-01-01: European Researchers' Night and Researchers at Schools 2026-2027

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 0.10 and 0.35 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 16.25 million.
<i>Type of Action</i>	Coordination and Support Actions

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: Activities carried-out in non-associated third countries are not eligible for funding.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To ensure a balanced portfolio covering the widest geographical coverage with events and activities held in as many eligible countries as possible, grants will be awarded to applications not only in order of ranking but at least also to each application that is highest ranked per country based on where the coordinator is established (including trans-national consortia), provided that the applications attain all thresholds.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>Eligible costs may take form of lump sum contributions as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie Actions under the Horizon Europe Programme.</p>

Expected Outcome: Project results are expected to contribute to the following outcomes:

For researchers

- Enhanced opportunities to interact with citizens and local, regional and national authorities;
- Improved communication skills and competences to interact with a non-research audience, notably with pupils and students.

For organisations

- Increased reputation and visibility of participating organisations in terms of hosting excellent research projects towards the general public and possible future students;
- Researchers' work made more tangible, concrete, accessible, and thus opening research and science to all;
- Improved outreach to all audiences across Europe, and notably those who do not have an easy access to science and research activities;
- Better communication of R&I results and activities to society, increased and strengthened opportunities for citizens' engagement.

Scope: Proposals should cover both the organisation of the European Researchers' Night and the implementation of the Researchers at Schools initiative.

The European Researchers' Night takes place every year, on the last Friday of September⁸⁸. It supports events that can last up to two days: they can start on Friday and continue the following day. Pre-events, prior to the main event, and related post-events, such as wrap-up meetings or small-scale follow-up events, can also be organised. It is the occasion for a Europe-wide public and media event for the promotion of research careers.

The European Researchers' Night targets the general public, addressing and attracting people regardless of the level of their scientific background, with a special focus on young people and their families, pupils and students, and notably those who do not have easy access to, and thus are less inclined to engage in STEAM fields (science, technology, engineering, arts and mathematics) or research activities.

The Researchers at Schools initiative brings school classes to research facilities and researchers to schools or other pedagogical and educational centres. This allows researchers to interact with pupils on societal challenges and on the key role of research to address them. Pupils will thus also learn directly about research projects and initiatives related to EU main priorities.

Types of activities

European Researchers' Night activities can combine education with entertainment, especially when addressing young audiences. They can take various forms, such as exhibitions, hands-on experiments, science shows, simulations, debates, games, competitions, quizzes, etc. Where appropriate, engagement with educational institutions should be sought in order to encourage formal and informal science education with the aim of improving the scientific knowledge base. The European Researchers' Night should be highlighted as a European and Europe-wide event. Additionally, each proposal should promote the European Union, EU-funded research and its impact on citizens' daily life in the most appropriate way, according to the set-up and the configuration of the event, its location and its activities.

Researchers at Schools activities will allow researchers to showcase their work and interact with pupils. They can take various forms, such as presentations, discussions, speed-dating, citizen science, science shows, summer schools, nature walks or visits to research facilities. Where appropriate, researchers should receive training ahead of the activities on science communication, especially targeting a young audience. The Researchers at Schools activities should take place at any time during the project duration and should be subject to a dedicated promotion, particularly towards schools and other pedagogical and educational centres.

Involvement of researchers funded by Horizon Europe or previous Framework Programmes, notably by the Marie Skłodowska-Curie Actions, is highly encouraged.

Both the European Researchers' Night and Researchers at Schools initiative should promote gender balance, diversity and inclusiveness in science in terms of planned activities and researchers involved.

⁸⁸ Except for countries which for strong cultural reasons would be prevented from organising any action addressing the public at large on such a date.

Partnerships and coordination at regional, national or cross-border levels will be strongly encouraged aiming at a good geographical spread and avoiding overlaps.

Where appropriate, synergies should be sought with the newly created Science Comes To Town initiative⁸⁹.

High-quality applications not retained due to lack of funding may be granted the status of associated events.

Eligible costs will take the form of lump sum contributions as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme.

The maximum requested EU contribution per proposal should not exceed EUR 350 000. All proposals are encouraged to bring additional sources of funding. The budget will be evaluated under the criterion 3 “Quality and efficiency of the implementation”. Proposals that exceed this maximum EU contribution might be penalised during the evaluation unless a strong justification is provided.

Applicants are encouraged to submit proposals covering activities for both 2026 and 2027, including the organisation of two successive editions (2026 and 2027) of the European Researchers’ Night and implementation of Researchers at Schools activities during the project duration.

⁸⁹ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/HORIZON-WIDERA-2024-ERA-02-02>

MSCA Support

MSCA Support includes a set of activities organised through calls for proposals to promote, support and complement the MSCA implementation. They will cover:

- the exploitation of the MSCA contribution to EU policies and priorities;
- the facilitation of cooperation between MSCA National Contact Points (NCPs);
- the promotion of the MSCA at international level;
- the support to European and national initiatives and programmes in support of researchers at risk.

Expected impact

Proposals under MSCA Support should contribute to some of the following expected impacts:

- Ensure a coordinated and strategic monitoring, assessment and dissemination of the MSCA results and best practices vis-à-vis relevant EU priorities (including EU Missions) and ERA objectives;
- Improve and further professionalise MSCA NCP services allowing a wider diffusion of the programme, lowering entry barriers for newcomers and increasing the overall quality of submitted proposals;
- Contribute to a more strategic international cooperation in MSCA in line with R&I mutual interests and EU external policies;
- Strengthen co-operation between European and national initiatives and programmes in support of researchers who are experiencing threats to their life, liberty, or research career, and those who are forced or have been forced to flee because of such threats.

The following call(s) in this work programme contribute to this Action:

Call	Budgets (EUR million)			Deadline(s)
	2023	2024	2025	
HORIZON-MSCA-2023-FTP-01	2.00			06 Jun 2023
HORIZON-MSCA-2024-NCP-01		2.00		04 Sep 2024

HORIZON- MSCA-2024- INCO-01		2.00		04 Sep 2024
HORIZON- MSCA-2024- RR-01		1.50		14 Jan 2025
HORIZON- MSCA-2024- FTP-01		2.00		03 Sep 2024
HORIZON- MSCA-2025- MSCA4UA-01			10.00	16 Sep 2025
Overall indicative budget	2.00	7.50	10.00	

Call - MSCA Feedback To Policy 2023

HORIZON-MSCA-2023-FTP-01

Conditions for the Call

Indicative budget(s)⁹⁰

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁹¹	Indicative number of projects expected to be funded
		2023		
Opening: 07 Mar 2023 Deadline(s): 06 Jun 2023				
HORIZON-MSCA-2023-FTP-01-01	CSA	2.00	1.50 to 2.00	1
Overall indicative budget		2.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General

⁹⁰ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

⁹¹ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

	Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2023-FTP-01-01: MSCA Feedback To Policy 2023

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.50 and 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: The granting authority can fund a maximum of one project. The evaluation committee will be composed partially or fully by representatives of EU institutions.

Expected Outcome: Project results are expected to contribute to the following outcomes:

- Coordinated monitoring and exploitation of the contribution of Horizon 2020 and Horizon Europe MSCA projects⁹² to the EU Missions⁹³;
- Enhanced interaction between MSCA beneficiaries, researchers and policymakers, on research results and their contribution to policy developments, and greater collaboration

⁹² This refers to MSCA Innovative Training Networks, Individual Fellowships, Research and Innovation Staff Exchanges, COFUND, NIGHT in Horizon 2020, and MSCA Doctoral Networks, Postdoctoral Fellowships, Staff exchanges, COFUND, MSCA and Citizens in Horizon Europe.

⁹³ [EU Missions in Horizon Europe | European Commission \(europa.eu\)](https://european-commission.europa.eu/eu-missions-in-horizon-europe)

among MSCA beneficiaries and researchers themselves particularly in view of possible follow-up partnerships and funding opportunities⁹⁴;

- Detailed MSCA portfolio analysis in the EU Missions areas;
- Recommendations for strengthening the policy impact of the MSCA;
- Assessment of the contribution of the MSCA to the ERA policy objectives related to support for researchers' training and skills development, and intersectoral cooperation;
- Strengthened synergies and complementarities between the MSCA and other relevant EU-funded initiatives and programmes linked to the EU Missions, researchers' training, skills and career development and related intersectoral cooperation.

Scope: While the bottom-up nature of the MSCA is and will remain its core principle, there is a need to have an overview of the funded research portfolio and make stronger thematic links between MSCA projects, raise visibility of their impact on ERA priority areas and gather stakeholder feedback on ways to maximise the MSCA impact. Given the thematic diversity of MSCA-funded projects, the scope of this call cannot cover all the areas to which the MSCA contribute. It should be seen as a pilot to map areas and types of intervention for possible similar actions in the future that will support a broader policy feedback process.

One of the objectives of this action is to support ongoing and planned Commission initiatives⁹⁵ which focus on exploiting and assessing the impact of Horizon 2020 and Horizon Europe projects results in relation to thematic and cross-cutting priorities, including the EU Missions.

It also aims to assess the extent to which MSCA projects achieve two of the core horizontal policy objectives of the programme: the development of researchers' training, skills and career and the related promotion of intersectoral collaboration.

Activities should therefore include the contribution and impact of MSCA projects in relation to:

- The EU Missions and societal challenges they address;
- Researchers' skills development, including but not limited to the skills needed to tackle the thematic areas of the Missions;
- Cooperation between academic and non-academic organisations⁹⁶, with the emphasis on the business sector.

⁹⁴ E.g. by following up outcomes and feedback received from MSCA cluster events through ensuring interaction with and between stakeholders

⁹⁵ E.g. Horizon Results Platform, Horizon Results Booster

⁹⁶ See definitions at the end of this Work Programme part

The activities should contribute to strengthening complementarities between ongoing MSCA projects, especially with a view to better exploiting their results and maximising their impact vis-à-vis the thematic and cross-cutting priorities mentioned above.

The proposed activities should include:

- Consolidating the ongoing EU Missions cross-portfolio analysis to make full use of MSCA projects results and analyse their contribution to each individual Mission;
- Identifying good practice examples of cooperation between academic and non-academic organisations, with a special emphasis on the business sector as well as the main obstacles for stronger intersectoral cooperation in MSCA;
- Identifying researchers' training, skills and career development needs (both research-related and transferable) to tackle societal challenges, including those covered by the Missions;
- Exploring ways to consolidate the available training material developed in MSCA projects, especially on transferrable skills, and exploring how to make it more broadly accessible for further exploitation;
- Following up the existing policy feedback activities under the MSCA, particularly through coordination with the ongoing Commission activities (cluster events, studies and analyses) and through regular consolidation of the outcomes and deliverables of policy feedback activities;
- Supporting/complementing existing communication and dissemination efforts by the European Commission⁹⁷ to promote and share MSCA success stories and examples of good practice in the thematic and horizontal priorities of this call (EU Missions, intersectoral cooperation, researchers' training, skills and career development);
- Identifying good practice of synergies between MSCA projects and other relevant programmes and initiatives;
- Providing practical recommendations on how to better exploit MSCA project results and enhance impact in the areas of EU Missions, intersectoral cooperation and researchers' skills and career development in line with the call's objectives.
- Analysing trends in research to feed back into the MSCA and Commission R&I policy. Due to their bottom-up nature, the MSCA provide a valuable resource for tracking changing research trends and can provide an evidence base for any changes in the latter stages of Horizon Europe as well as the design of subsequent framework programmes;

The expected deliverables should include a combination of analytical reports, *ad hoc* policy briefs, stakeholders' events and meetings, policy roundtables and different communication and dissemination support actions, such as:

⁹⁷ E.g.: Horizon Results Platform and Booster, Euraxess

- Studies, analyses, reports looking into trends and developments in MSCA relevant to:
 - The EU Missions, including citizens' engagement activities;
 - Researchers' skills and career development and training;
 - Intersectoral cooperation between academia and other sectors (businesses, industry, SMEs, public administration, civil society organisations, etc.), as well as motivation and obstacles to engage in such cooperation;
 - Examples of synergies and complementarities with other EU/national/regional programmes and frameworks.
- Consolidation of projects results for policy feedback and communication and dissemination purposes;
- Dissemination and networking activities using the results of cluster events and communities of practice identified for the events; consulting project beneficiaries on policy needs, dissemination based on reports and feedback from cluster events; providing input into coordination of cluster events (e.g. suggesting themes, format and structure of cluster events);
- Synthesis of coordination activities linked to policy feedback and the improved exploitation of MSCA projects results: e.g. preparatory briefings, follow-up reports, feedback consolidation linked to MSCA cluster events, *ad hoc* policy briefs and monitoring of exploitation opportunities.

The maximum duration of the action is 48 months.

Call - Trans-national cooperation among Marie Skłodowska-Curie National Contact Points (NCP) 2024

HORIZON-MSCA-2024-NCP-01

Conditions for the Call

Indicative budget(s)⁹⁸

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR	Indicative number of
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⁹⁸ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
 The Director-General responsible may delay the deadline(s) by up to two months.
 All deadlines are at 17.00.00 Brussels local time.
 The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

		2024	million) ⁹⁹	projects expected to be funded
<p>Opening: 16 May 2024</p> <p>Deadline(s): 04 Sep 2024</p>				
HORIZON-MSCA-2024-NCP-01-01	CSA	2.00	1.50 to 2.00	1
Overall indicative budget		2.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2024-NCP-01-01: Trans-national cooperation among Marie Skłodowska-Curie National Contact Points (NCP) 2024

Specific conditions	
<i>Expected EU contribution per</i>	The Commission estimates that an EU contribution of between EUR 1.50 and 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and

⁹⁹ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

<i>project</i>	selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>The following additional eligibility criteria apply: Participants other than associated partners must be Horizon Europe national support structures (e.g. NCP) responsible for MSCA and officially nominated to the Commission, from a Member State or Associated Country.</p> <p>Only if and for as long as Horizon Europe structures have not been officially nominated when the call opens, will national support structures responsible for MSCA nominated for Horizon 2020 be eligible.</p> <p>Due to the scope of this topic, legal entities established in non-associated third countries are exceptionally eligible for Union funding.</p> <p>Legal entities established in non-associated third countries may exceptionally participate in this Coordination and support action in a capacity other than as an associated partner.</p>
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The evaluation committee will be composed partially or fully by representatives of EU institutions.</p> <p>The granting authority can fund a maximum of one project.</p>

Expected Outcome: Projects are expected to contribute to the following outcomes:

- An improved and professionalised NCP service across Europe, thereby helping simplify access to Horizon Europe calls, lowering the entry barriers for newcomers, and raising the average quality of proposals submitted;
- Harmonised and improved trans-national cooperation between NCPs;
- More consistent level of NCP support services across Europe and beyond, notably in widening countries;
- Increased participation of third-country NCPs in the activities of the action.

Scope: The objective is to facilitate the trans-national co-operation between National Contact Points (NCPs) for the MSCA, including those established in Third Countries, with a view to identifying and sharing good practices and raising the general standard of support to applicants, taking into account the diversity of actors and experiences.

Support will be given to a consortium of formally nominated MSCA NCPs. The activities will be tailor-made to the needs and priorities of the NCPs concerned and may include benchmarking, joint workshops, enhanced cross-border brokerage events, training sessions linked to the MSCA and wider R&I priorities and tools, twinning and mentoring schemes. Special attention will be given to enhancing the competence of MSCA NCPs, including helping newcomers and less experienced NCPs to rapidly acquire the know-how accumulated by their peers. Cooperation with other EU networks such as Euraxess Worldwide, Enterprise Europe Network, COST, will be encouraged to increase the visibility to potential beneficiaries, especially in the non-academic sector.

Addressing the R&I gap

There still is a research and innovation gap across Europe and discrepancies remain between European countries in their capacity to attract funding and researchers. This gap is observed in the MSCA as well, and specific measures to support the NCPs in “widening countries,” such as training and mentorship schemes, should be organised to stimulate more high-quality applications with beneficiaries in these countries and increase their success rate in MSCA.

Attract researchers from third countries

The MSCA are the main EU instrument to attract researchers from Third Countries to Europe. Specific measures to encourage Third-Country NCPs to create contacts and participate in the activities of the project (e.g. training, twinning, mentoring, and other capacity building and networking activities) should be foreseen.

The focus throughout should be on issues specific to the MSCA and should not duplicate actions foreseen in the NCP network under “Widening participation and strengthening the European Research Area”.

The consortium should have a good representation of experienced and less experienced NCPs and include NCPs from widening countries.

Submission of a single proposal is encouraged. NCPs choosing not to participate as a member of the consortium are nevertheless invited and encouraged to participate in the project activities (e.g. workshops).

The expected duration of the action will be 36 months.

Call - MSCA International Cooperation 2024

HORIZON-MSCA-2024-INCO-01

Conditions for the Call

Indicative budget(s)¹⁰⁰

¹⁰⁰ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁰¹	Indicative number of projects expected to be funded
		2024		
Opening: 14 May 2024 Deadline(s): 04 Sep 2024				
HORIZON-MSCA-2024-INCO-01-01	CSA	2.00	1.50 to 2.00	1
Overall indicative budget		2.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

¹⁰¹ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

HORIZON-MSCA-2024-INCO-01-01: MSCA International Cooperation 2024

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.50 and 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p> <p>The evaluation committee will be composed partially or fully by representatives of EU institutions.</p>

Expected Outcome: Project results are expected to contribute to the following outcomes:

- Broader and more strategic promotion of international cooperation opportunities offered through MSCA;
- Monitoring progress, opportunities and challenges in MSCA bilateral and bi-regional cooperation with main international partner countries and regions;
- Strengthening complementarities with other relevant promotion and cooperation initiatives funded through Horizon Europe or other EU programmes.

Scope: The objective is to foster international cooperation in MSCA in Horizon Europe, through a dedicated support action to complement and ensure coordination between existing promotion channels at local level, and ensure consistency with formal R&I policy dialogues at bilateral and regional levels. Focus should be given:

- At bilateral level on countries having concluded bilateral Science and Technology Agreements with the EU (Algeria, Argentina, Australia, Brazil, Canada, Chile, China, Egypt, India, Japan, Jordan, Korea, Mexico, Morocco, New Zealand, South Africa, Switzerland, Tunisia, Ukraine and the United States).
- At regional level, on bi-regional research and innovation policy dialogues, established notably with the African Union, ASEAN, LAC, Mediterranean partner countries, Eastern Partnership countries and Western Balkans.

Based on the outcomes of a study¹⁰² on the MSCA international dimension in Horizon 2020, activities to be implemented should include:

- Policy support to bilateral/bi-regional cooperation: assessing main cooperation trends, opportunities and challenges related to local developments in the R&I/higher education domain; identifying possible gaps versus joint priorities and participation of prominent local stakeholders; reviewing existing cooperation mechanisms (info relays, training, co-funding schemes) relevance and efficiency for MSCA; identifying main existing or planned cooperation initiatives to build upon, as well as major local players, networks and associations to be prioritized; qualitative monitoring of the participation in the different MSCA calls; preparing background reports ahead of joint committee meetings and regional dialogues; providing contributions to newsletters and periodic reports from existing information relays, e.g. Euraxess Worldwide, EU Delegations.
- Promotion of MSCA cooperation opportunities: identifying main local/bilateral or bi-regional events to target for MSCA promotion and opportunities for ad-hoc events co-located with bilateral/regional policy dialogues; liaising with local MSCA info relays, including local NCPs, Euraxess Worldwide offices, EU Delegations/S&T Counsellors, National Erasmus+ Offices, Enterprise Europe Network and other stakeholders/association representatives to identify coordinated promotion plans; organising MSCA promotion and training sessions (including through the physical participation of EU trainers when relevant); liaising with the EU NCP coordination platform to coordinate promotion activities with MSCA NCPs
- Cross cutting activities: analysing consistency with EU R&I bilateral and bi-regional, cooperation roadmaps and action plans, people-to-people dialogues, synergies with promotion events and activities related to Horizon Europe, including ERC or COST and other EU programmes (in particular Erasmus+).

The expected duration of the action is 36 months.

Call - MSCA for Researchers at Risk 2024

HORIZON-MSCA-2024-RR-01

Conditions for the Call

Indicative budget(s)¹⁰³

Topics	Type	Budgets	Expected EU	Indicative
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¹⁰² <https://op.europa.eu/en/publication-detail/-/publication/b15de047-216e-11ea-95ab-01aa75ed71a1/language-en/format-PDF/source-112180987>

¹⁰³ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

	of Action	(EUR million)	contribution per project (EUR million) ¹⁰⁴	number of projects expected to be funded
		2024		
Opening: 12 Sep 2024 Deadline(s): 14 Jan 2025				
HORIZON-MSCA-2024-RR-01-01	CSA	1.50	1.00 to 1.50	1
Overall indicative budget		1.50		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2024-RR-01-01: MSCA Researchers at Risk 2024

Specific conditions	
<i>Expected EU contribution per</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 1.50 million would allow these outcomes to be addressed

¹⁰⁴ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

<i>project</i>	appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.50 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p> <p>The evaluation committee will be composed partially or fully by representatives of EU institutions.</p>

Expected Outcome: Project results are expected to contribute to the following outcomes:

- More targeted and customised support for researchers at risk at European, national and institutional level;
- Improved support to researchers at risk through the provision of policy recommendations, as well as advice and assistance on their implementation;
- A more sustainable and professionalised support network/structure/system for researchers at risk across Europe, facilitating access to funding and networking opportunities, creating level playing field for applicants to European and national R&I programmes, and raising the quality of submitted proposals;
- More synergies between initiatives supporting researchers at risk funded by EU programmes (such as Horizon Europe and Erasmus+) and national or institutional actors;
- Increased exposure of researchers at risk to the industry and to the non-academic sector notably through targeted networking events, professional training, mentoring and guidance;
- Greater awareness in Europe and beyond on why researchers are at risk and ways to support them.

Scope: Building on the available results of past and on-going Researchers at Risk initiatives¹⁰⁵ which have strengthened support structures across the EU and provided some form of guidance for researchers at risk, further support is envisaged for scaling up and moving towards more customised support for researchers at risk based on the needs already identified in the national and EU initiatives implemented so far.

Lack of regular needs-based training and targeted networking activities remains a challenge for many researchers at risk in Europe without professional networks and direct sources of information addressing their specific needs.

¹⁰⁵ Eg. Inspireurope ([Inspireurope - SAR Europe](#)) ; Inspireurope+ ; MSCA4Ukraine

Moving further from solely identifying researchers' needs, this action should aim at delivering the best possible solutions to the challenges faced by researchers.

The support action should be aligned with the general objectives of the MSCA, in particular scientific excellence, skills and career development, inter-sectoral mobility, equal opportunities and inclusiveness, attractive working conditions, work/life balance, while fostering open science, innovation and entrepreneurship. This action will place a specific focus on training and networking activities for researchers, in line with the MSCA priorities and as a step further in providing sustainable and needs-based professional development support for researchers at risk across Europe.

It should not duplicate other actions foreseen under Horizon Europe or other EU-funded programmes such as Erasmus+, but rather build synergies between these programmes. The activities carried out under this support action should complement actions in EU Member States and third countries associated to Horizon Europe.

The expected duration of the action is 36 months.

Call - MSCA Feedback to Policy 2024

HORIZON-MSCA-2024-FTP-01

Conditions for the Call

Indicative budget(s)¹⁰⁶

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁰⁷	Indicative number of projects expected to be funded
		2024		
Opening: 25 Apr 2024 Deadline(s): 03 Sep 2024				
HORIZON-MSCA-2024-FTP-01-01	CSA	2.00	1.50 to 2.00	1
Overall indicative budget		2.00		

¹⁰⁶ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.

The Director-General responsible may delay the deadline(s) by up to two months.

All deadlines are at 17.00.00 Brussels local time.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

¹⁰⁷ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2024-FTP-01-01: MSCA Feedback To Policy 2024

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.50 and 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: The granting authority can fund a maximum of one project.

Expected Outcome: Project results are expected to contribute to the following outcomes:

- Coordinated monitoring and exploitation of the contribution of Horizon 2020 and Horizon Europe MSCA projects¹⁰⁸ to the EU Missions¹⁰⁹;
- Enhanced interaction between MSCA beneficiaries, researchers and policymakers, on research results and their contribution to policy developments, and greater collaboration among MSCA beneficiaries and researchers themselves particularly in view of possible follow-up partnerships and funding opportunities¹¹⁰;
- Detailed MSCA portfolio analysis in the EU Missions areas;
- Recommendations for strengthening the policy impact of the MSCA;
- Assessment of the contribution of the MSCA to the ERA policy objectives related to support for researchers' training and skills development, and intersectoral cooperation;
- Strengthened synergies and complementarities between the MSCA and other relevant EU-funded initiatives and programmes linked to the EU Missions, researchers' training, skills and career development and related intersectoral cooperation.

Scope: While the bottom-up nature of the MSCA is and will remain its core principle, there is a need to have an overview of the funded research portfolio and make stronger thematic links between MSCA projects, raise visibility of their impact on ERA priority areas and gather stakeholder feedback on ways to maximise the MSCA impact. Given the thematic diversity of MSCA-funded projects, the scope of this call¹¹¹ cannot cover all the areas to which the MSCA contribute. It should be seen as a pilot to map areas and types of intervention for possible similar actions in the future that will support a broader policy feedback process.

One of the objectives of this action is to support ongoing and planned Commission initiatives¹¹² which focus on exploiting and assessing the impact of Horizon 2020 and Horizon Europe projects results in relation to thematic and cross-cutting priorities, including the EU Missions.

It also aims to assess the extent to which MSCA projects achieve two of the core horizontal policy objectives of the programme: the development of researchers' training, skills and career and the related promotion of intersectoral collaboration.

Activities should therefore include the contribution and impact of MSCA projects in relation to:

- The EU Missions and societal challenges they address;

¹⁰⁸ This refers to MSCA Innovative Training Networks, Individual Fellowships, Research and Innovation Staff Exchanges, COFUND, NIGHT in Horizon 2020, and MSCA Doctoral Networks, Postdoctoral Fellowships, Staff exchanges, COFUND, MSCA and Citizens in Horizon Europe.

¹⁰⁹ [EU Missions in Horizon Europe | European Commission \(europa.eu\)](#)

¹¹⁰ E.g. by following up outcomes and feedback received from MSCA cluster events through ensuring interaction with and between stakeholders

¹¹¹ This call is a relaunch of the call HORIZON-MSCA-2023-FTP-01

¹¹² E.g. Horizon Results Platform, Horizon Results Booster

- Researchers' skills development, including but not limited to the skills needed to tackle the thematic areas of the Missions;
- Cooperation between academic and non-academic organisations¹¹³, with the emphasis on the business sector.

The activities should contribute to strengthening complementarities between ongoing MSCA projects, especially with a view to better exploiting their results and maximising their impact vis-à-vis the thematic and cross-cutting priorities mentioned above.

The proposed activities should include:

- Consolidating the ongoing EU Missions cross-portfolio analysis to make full use of MSCA projects results and analyse their contribution to each individual Mission;
- Identifying good practice examples of cooperation between academic and non-academic organisations, with a special emphasis on the business sector as well as the main obstacles for stronger intersectoral cooperation in MSCA;
- Identifying researchers' training, skills and career development needs (both research-related and transferable) to tackle societal challenges, including those covered by the Missions;
- Exploring ways to consolidate the available training material developed in MSCA projects, especially on transferrable skills, and exploring how to make it more broadly accessible for further exploitation;
- Following up the existing policy feedback activities under the MSCA, particularly through coordination with the ongoing Commission activities (cluster events, studies and analyses) and through regular consolidation of the outcomes and deliverables of policy feedback activities;
- Supporting/complementing existing communication and dissemination efforts by the European Commission¹¹⁴ to promote and share MSCA success stories and examples of good practice in the thematic and horizontal priorities of this call (EU Missions, intersectoral cooperation, researchers' training, skills and career development);
- Identifying good practice of synergies between MSCA projects and other relevant programmes and initiatives;
- Providing practical recommendations on how to better exploit MSCA project results and enhance impact in the areas of EU Missions, intersectoral cooperation and researchers' skills and career development in line with the call's objectives.

¹¹³ See definitions at the end of this Work Programme part

¹¹⁴ E.g.: Horizon Results Platform and Booster, Euraxess

- Analysing trends in research to feed back into the MSCA and Commission R&I policy. Due to their bottom-up nature, the MSCA provide a valuable resource for tracking changing research trends and can provide an evidence base for any changes in the latter stages of Horizon Europe as well as the design of subsequent framework programmes;

The expected deliverables should include a combination of analytical reports, *ad hoc* policy briefs, stakeholders' events and meetings, policy roundtables and different communication and dissemination support actions, such as:

- Studies, analyses, reports looking into trends and developments in MSCA relevant to:
 - The EU Missions, including citizens' engagement activities;
 - Researchers' skills and career development and training;
 - Intersectoral cooperation between academia and other sectors (businesses, industry, SMEs, public administration, civil society organisations, etc.), as well as motivation and obstacles to engage in such cooperation;
 - Examples of synergies and complementarities with other EU/national/regional programmes and frameworks.
- Consolidation of projects results for policy feedback and communication and dissemination purposes;
- Dissemination and networking activities using the results of cluster events and communities of practice identified for the events; consulting project beneficiaries on policy needs, dissemination based on reports and feedback from cluster events; providing input into coordination of cluster events (e.g. suggesting themes, format and structure of cluster events);
- Synthesis of coordination activities linked to policy feedback and the improved exploitation of MSCA projects results: e.g. preparatory briefings, follow-up reports, feedback consolidation linked to MSCA cluster events, *ad hoc* policy briefs and monitoring of exploitation opportunities.

The maximum duration of the action is 48 months.

Call - MSCA4Ukraine Fellowships 2025

HORIZON-MSCA-2025-MSCA4UA-01

Conditions for the Call

Indicative budget(s)¹¹⁵

¹¹⁵ The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹¹⁶	Indicative number of projects expected to be funded
		2025		
Opening: 06 May 2025				
Deadline(s): 16 Sep 2025				
HORIZON-MSCA-2025-MSCA4UA-01-01	CSA	10.00	9.50 to 10.00	1
Overall indicative budget		10.00		

General conditions relating to this call	
<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Proposals are invited against the following topic(s):

HORIZON-MSCA-2025-MSCA4UA-01-01: MSCA4Ukraine Fellowships 2025

Specific conditions

¹¹⁶ The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 9.50 and 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: The granting authority can fund a maximum of one project.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants based on unit contributions, as stipulated in the Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for the Marie Skłodowska-Curie Actions under the Horizon Europe programme. The same unit contributions as in MSCA Doctoral Networks and MSCA Postdoctoral Fellowships, under the same eligibility conditions, will be applied for doctoral candidates and postdoctoral researchers respectively. Consequently, and given the need to act rapidly in the context of the crisis caused by the war in Ukraine and the uncertainty related to its resolution, the maximum amount to be granted to each third party is EUR 2.00 million (covering the recruitment of several researchers).

Expected Outcome: Through the provision of fellowships to displaced researchers from Ukraine, the grant is expected to contribute to the following expected outcomes:

- Protection of displaced researchers from Ukraine to continue their research in academic or non-academic organisations¹¹⁷ in EU Member States or Horizon Europe Associated Countries through dedicated fellowships and facilitate their reintegration to Ukraine when safe conditions for return are met.
- Strengthened integration between the EU and Ukrainian research and innovation communities.

At the level of individual researchers to be supported, the following outcomes are expected:

¹¹⁷ See definitions at the end of this Work Programme

- New research and transferable skills and competences, leading to improved employability and career prospects within and outside academia and contributing to rebuilding Ukraine's R&I sector once the conditions allow.
- New knowledge allowing the conversion of ideas into products and services, where relevant.
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

Scope: Given that the ongoing Russia's war of aggression against Ukraine has caused and continues to cause significant damage to Ukraine's R&I landscape as well as to force researchers based in Ukraine to flee the country, the need for support remains. The objective of the grant is to provide this support in the form of fellowships to displaced researchers from Ukraine to continue or resume their research activities at host organisations established in EU Member States or Horizon Europe Associated Countries.

Support to individual researchers should be open to all domains of research and innovation and aligned with the general objectives and principles of the MSCA, including scientific excellence, skills and career development, inter-sectoral mobility, equal opportunities and inclusiveness, attractive working conditions, work/life balance, while fostering open science, innovation and entrepreneurship.

Support will include training activities that should respond to well-identified needs in various research and innovation areas, with appropriate references to inter- and multidisciplinary fields. They should be primarily focused on developing new scientific knowledge through original research on personalised projects. Complementary training should also be provided to develop key transferable skills and competences common to all fields, foster innovation and entrepreneurship, and promote and (where appropriate) reward Open Science practices.

Short-term secondments of researchers to other organisations than those recruiting them, especially based in Ukraine if conditions allow, and including in third countries non-associated to Horizon Europe, are encouraged when relevant, feasible and beneficial for the researchers and in line with the research objectives. Inter-sectoral secondments are particularly encouraged to increase the employability of the researchers outside academia.

Particular attention will be paid to the quality of supervision and mentoring arrangements as well as career guidance.

Supported researchers can be either doctoral candidates (i.e. already enrolled in a doctoral programme leading to the award of a doctoral degree) or postdoctoral researchers (i.e. in possession of a doctoral degree). They must be either Ukrainian nationals, stateless persons, or nationals from third countries other than Ukraine, residing in Ukraine, who have been displaced on or after 24 February 2022.

Eligible third parties that will recruit researchers include any academic or non-academic organisations established in an EU Member State or Horizon Europe Associated Country. Other organisations, including those established in non-associated third countries can host researchers for short-term secondments.

If conditions allow, organisations based in Ukraine are encouraged to host displaced researchers thus supporting their reintegration back into the country.

The duration of each individual fellowship is to be determined by the beneficiaries in agreement with the recruiting organisations, with a maximum duration of 2 years.

Secondments to other organisations are eligible for up to one third of the fellowship duration.

The expected duration of the action is 36 months.

Expected Impact:

- Allow the EU to respond to the crisis faced by displaced researchers from Ukraine in line with its core values, and academic freedom in particular.
- Sustain Ukrainian research and innovation capacities by allowing displaced researchers from Ukraine to continue their research activities and enable them to contribute to restoring Ukraine's R&I sector.
- Reinforcement of the EU research and innovation cooperation with Ukraine.

Other Actions not subject to calls for proposals

Grants not subject to calls for proposals

1. Presidency event: MSCA Spanish Presidency Conference 2023¹¹⁸

The challenges the world is facing require a joint response from policymakers, society, academia, and industry. We have witnessed how science and scientists have become, more than ever, fundamental in the global response to current crisis. Moreover, science is also a key dimension of the EU digital and green transitions. However, much needs to be done in order to make even more of scientific knowledge and highly skilled professionals with a scientific background towards addressing EU's vision.

The role of MSCA in the following areas will be discussed in the MSCA Conference: How to foster knowledge interfaces that better connect science, policy making, industry and society and how to diversify scientific career paths while ensuring to nurture these interfaces, keeping in mind the relevance of gender equality in the European Research & Innovation Area (ERA).

The Conference will target the following expected outcomes:

- MSCA towards addressing global challenges
- MSCA fostering the connection between science, policy making, industry and society
- How MSCA can contribute to diversify scientific career paths
- How MSCA can contribute to gender equality in the European Research & Innovation Area (ERA)

Legal entities:

FECYT F.S.P. (Spanish Foundation for Science and Technology), C/Pintor Murillo, 15 – 28100 Alcobendas (Madrid)

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 195(e) - Coordination and support action

Indicative timetable: Third quarter 2023

Indicative budget: EUR 0.15 million from the 2023 budget

2. Presidency event: MSCA Belgian Presidency Conference 2024¹¹⁹

The Conference will address the following subjects:

¹¹⁸ MSCA Presidency Conference 2023: MSCA towards addressing global challenges
¹¹⁹ Research careers in and outside academia

- A reworked Charter and Code, the competence framework, career observatory (incl. Open Science) and the reforming of research assessment of researchers;
- Showcasing excellent open science practices from the first running Horizon Europe MSCA projects;
- Scientific impact: how to rhyme the long term impact of the research (as requested in the proposal) with MSCA also supporting fundamental bottom-up science where the outcome and its applications may still be unknown?
- Societal/economic impact: the importance of the MSCA and its bottom-up nature for innovation;
- Sharing the perspectives of fellows, supervisors, institutions and policy makers on two novelties of HE: the Green Charter and Guidelines on Supervision;
- Synergies between European instrument to support R&I: do transnational alliances of European universities integrate MSCA calls in their strategy and what are the results so far?
- Gender inequalities in careers and the issue of precarious careers, in particular the tension between sustainable careers versus unsustainable funding: what role can universities and funders play in supporting long-term career opportunities in a context of short-term funding?

Legal entities:

Service Public de Wallonie, Place Joséphine Charlotte 2 5100 Namur

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 195(e) - Coordination and support action

Indicative timetable: Second quarter 2024

Indicative budget: EUR 0.15 million from the 2024 budget

3. Presidency event: MSCA Danish Presidency Conference 2025

European universities and societies are dependent on excellent researchers in academia, now and in the future. A number of articles and surveys point out challenges in academic working life which cause distress and health problems especially among young researchers. This may lead to loss of excellence in academia.

The MSCA programme with its scope of excellent research and career development can contribute to increased focus on well-being amongst and retention of young researchers in academia by addressing different aspects affecting the working life of PhD students and postdocs.

The conference will address:

- Career development, including funding and job opportunities in academia
- General working conditions, including working hours and job security
- Well-being, including recognition, academic fairness, independence, and management and collegial support
- Gender/equality, including a diverse and safe work environment and equal opportunities free of bias
- Future generations, including a view to demands from future research generations, which may have new and untraditional expectations to working life and hence challenge the current set-up of the academic job market and working conditions.

Legal entities:

Technical University of Denmark (DTU), Anker Engellundsvej 1, 2800 Kgs. Lyngby, Denmark

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 195(e) - Coordination and support action

Indicative timetable: fourth quarter 2025

Indicative budget: EUR 0.15 million from the 2025 budget

4. Support to the Marie Curie Alumni Association

Expected Outcome: This coordination and support action is expected to contribute to the following outcomes:

- A well-functioning MCAA, providing useful services to its members;
- Relevant policy feedback to the European Commission;
- An expanded network of MSCA alumni;
- Improved networking and cooperation among MSCA alumni;
- Improved visibility, sustainability, reach, relevance and impact of the MSCA.

Expected Impact:

- Increase the impact of the Marie Skłodowska-Curie actions through greater networking and cooperation between MSCA fellows (current and past);
- Promote the outreach and visibility of the MSCA at European and Global level;

- Promote Europe as an excellent research destination;
- Enhance the policy feedback to the European Commission on the MSCA and EU policies more broadly.

Scope:

This grant will be awarded without a call for proposals according to Article 195(e) of the Financial Regulation and Article 24(3)(b) of the Horizon Europe Regulation. The use of a grant to identified beneficiary is justified by the particular role and purpose of the MCAA, its unique nature and the fact that the association gathers around 20.000 MSCA alumni.

This action should support the MCAA in achieving the following objectives:

- Supporting the functioning of the MCAA, foster its expansion and growth on the European and international stage;
- Facilitating professional networking and career development of former and current MSCA fellows;
- Encouraging networking and cooperation among members from different countries, sectors of the economy and across scientific disciplines;
- Enabling alumni to act as MSCA ambassadors and promoters within the global research and innovation community, but also for the European Commission and EU Delegations throughout the world;
- Provide feedback to the European Commission on the MSCA to constantly improve its success, relevance and impact; and provide feedback on relevant EU policies.

At least 30% and no more than 50% of the maximum grant amount must be allocated to individual members of the MCAA as well as Working Groups and Chapters for their activities including travel, development and production of media materials related to the MCAA.

Eligible activities under this grant include *inter alia*:

- Organisation of physical and virtual MCAA governance body meetings according to the need of the MCAA;
- Organisation of General Assembly meetings of the MCAA and annual MCAA Conference;
- Support for Alumni, Chapters and Working groups;
- Maintenance and continuous development of the MCAA's IT infrastructure and website, including the membership database;
- Data collection and provision of structured feedback on the MSCA, including online surveys, in agreement with the Commission, to obtain feedback on EU policy topics, on

the MSCA, on the development of the network or any other topic of interest to both parties.

The following deliverables will have to be submitted:

- Yearly work plans on the functioning and growth of the MCAA submitted at month 6 and updated at month 18;
- A long-term plan for the evolution of the MCAA submitted at month 6, and updated at month 18;
- A communication plan to be submitted 6 months after the beginning of the grant;
- A progress report at month 6 and month 18.

The expected duration of the action is 36 months.

The evaluation committee will be composed fully by representatives of EU institutions. The evaluation committee can be assisted by external experts if required.

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Indicative timetable: second quarter 2024

Legal entities:

MCAA-Marie Curie Alumni Association, MCAA, c/o Inovamais, Avenue des Arts, 24, B-1000 Brussels, Belgium

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 195(e) - Coordination and support action

Indicative budget: EUR 4.00 million from the 2024 budget

5. MSCA Special Needs Allowances to Horizon 2020 legacy projects

The MSCA pay particular attention to accessibility and inclusiveness and foresee financial support for the additional costs entailed by recruited or seconded researchers/staff members with disabilities whose long-term physical, mental, intellectual or sensory impairments¹²⁰ are as such that their participation in MSCA would not be possible without extra financial support.

¹²⁰ See Article 1 of the UN Convention on the Rights of Persons with Disabilities.

Beneficiaries of Horizon 2020 ITN, IF, RISE and COFUND grants can continue to apply for a dedicated special needs grant. This grant will cover the additional costs that researchers/staff members with disabilities face due to the increased costs of their mobility. It can also be used to ensure necessary assistance by third persons or for adapting their work environment¹²¹. It cannot cover costs which are already covered by another source, such as social security or health insurance.

The support will be granted based on the request submitted by the coordinator of the MSCA grant (Horizon 2020 ITN, IF, RISE and COFUND grants) to the granting authority. The request can be submitted at any moment during the implementation of the MSCA grant, when the need arises. The request should contain a description of the special needs, the type of support and the budget requested. The request will be evaluated by the granting authority and, if needed, an assistance by external experts may be requested.

Once agreed, the MSCA grant agreement will be formally amended and the requested amount for the special needs will be covered by the increase of the budget in the Management cost category. This extra amount will be paid together with the payment of the balance. The support will be limited to a maximum of EUR 60 000 per researcher/staff member.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 195(e) - Coordination and support action

Indicative timetable: Throughout 2023, 2024 and 2025

Indicative budget: EUR 0.20 million from the 2023 budget

6. MSCA4Ukraine

As part of the EU's response to the war in Ukraine and the need for rapid action, a grant was awarded under the Horizon Europe Work Programme 2021-2022 without a call for proposals in accordance with Article 195(b)¹²² of the Financial Regulation (pursuant to HORIZON-MSCA-2022-Ukraine-ART195-IBA).

Given that the ongoing Russia's war of aggression against Ukraine has caused and continues to cause significant damage to Ukraine's research and innovation landscape as well as to force researchers based in Ukraine to flee the country, the need for support remains essential.

As Ukraine's R&I infrastructure continues to be severely damaged and destroyed, it is crucial to support researchers who will be able help rebuild the country's R&I capacity upon their return.

¹²¹ See Article 5 of the Council Directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation.

¹²² Article 195(b) of the Financial Regulation 2018/1046 "Grants may be awarded without a call for proposals only in the following cases: [...] (b) in other exceptional and duly substantiated emergencies".

Expected outcome

Through the provision of additional fellowships to displaced researchers from Ukraine, the current action will further strengthen integration between the EU and Ukrainian research and innovation communities and support Ukraine's research and innovation capacity by allowing displaced researchers from Ukraine to continue their research activities and expand their expertise.

Through the provision of fellowships, training and networking opportunities to displaced researchers from Ukraine, the grant is expected to contribute to the following expected outcomes:

- Protection of displaced researchers from Ukraine to continue their research in academic or non-academic organisations¹²³ in EU Member States or Horizon Europe Associated Countries through dedicated fellowships and facilitate their reintegration to Ukraine when safe conditions for return are met.
- Strengthened integration between the EU and Ukrainian research and innovation communities.

At the level of individual researchers to be supported, the following outcomes are expected:

- New research and transferable skills and competences, leading to improved employability and career prospects within and outside academia.
- New knowledge allowing the conversion of ideas into products and services, where relevant.
- Enhanced networking and communication capacities with scientific peers, as well as with the public that will increase and broaden the research and innovation impact upon their return to Ukraine.

Expected impact

- Allow the EU to continue to support displaced researchers from Ukraine in line with its core values, including academic freedom.
- Sustain Ukrainian research and innovation capacities by allowing displaced researchers from Ukraine to continue their research activities and maintain their network in Ukraine.
- Reinforcement of the EU research and innovation cooperation with Ukraine

Scope

This grant will be awarded without a call for proposals according to Article 195(e) of the Financial Regulation and Article 24(3)(b) of the Horizon Europe Regulation to the legal entities identified below. These legal entities have a unique experience in assisting researchers

¹²³ See definitions at the end of this Work Programme

at risk in general and researchers affected by Russia's war of aggression against Ukraine in particular. This includes providing direct financial support to researchers, giving them access to a large network of host organisations in EU Member States and Associated countries and building on experience acquired during the implementation of the MSCA4Ukraine grant awarded under HORIZON-MSCA-2022-Ukraine-ART195-IBA call.

The objective of this action is to continue to provide rapid support in the form of fellowships to displaced researchers from Ukraine to resume their research activities at host organisations established in EU Member States or Horizon Europe Associated Countries. For this purpose, proposals should foresee a new open call to provide support with the funding from this action, which should follow the financial support to third parties scheme already agreed and stipulated in the grant agreement concluded pursuant to HORIZON-MSCA-2022-Ukraine-ART195-IBA call (and which should only differ if justified).

The beneficiaries will provide financial support to third parties in the form of unit contributions, as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for the Marie Skłodowska-Curie Actions under the Horizon Europe programme. The same unit contributions as in MSCA Doctoral Networks and MSCA Postdoctoral Fellowships will be applied for doctoral candidates and postdoctoral researchers respectively. Eligible third parties that will recruit researchers include any academic or non-academic organisations established in an EU Member State or Horizon Europe Associated Country. Other organisations, including those established in non-associated third countries can host researchers for short-term secondments.

This action is intended to be implemented, following an award decision, in the form of an amendment of the grant agreement concluded pursuant to HORIZON-MSCA-2022-Ukraine-ART195-IBA call.

The expected duration of the action is 36 months.

The evaluation committee will be composed fully by representatives of EU institutions. The evaluation committee can be assisted by external experts if required.

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes.

Legal entities:

Beneficiaries of the grant awarded under the call HORIZON-MSCA-2022-Ukraine-ART195-IBA

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 195(e) - Coordination and support action

Indicative timetable: Second quarter 2024

Indicative budget: EUR 10.00 million from the 2024 budget

Procurements

1. Public Procurement for Events and Outreach

During 2023, 2024 and 2025, the Commission will organise several events (conferences and workshops) dedicated to the Marie Skłodowska-Curie Actions and to contribute to leading research conferences. Moreover, a dedicated campaign will be organised to ensure the visibility of the Marie Skłodowska-Curie Actions and funded projects to the general public.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 0.50 million from the 2023 budget and EUR 0.50 million from the 2024 budget and EUR 0.50 million from the 2025 budget

Other budget implementation instruments

1. External Expertise

This action will support the use of appointed independent experts for the monitoring of ongoing actions (grant agreements, grant decisions, public procurement actions, financial instruments) funded under Horizon Europe and previous Framework Programmes for Research and Innovation and where appropriate include ethics checks, as well as compliance checks regarding the Gender Equality Plan eligibility criterion.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative budget: EUR 0.50 million from the 2023 budget and EUR 0.50 million from the 2024 budget and EUR 0.50 million from the 2025 budget

Budget¹²⁴

	Budget line(s)	2023 Budget (EUR million)	2024 Budget (EUR million)	2025 Budget (EUR million)
Calls				
HORIZON-MSCA-2023-DN-01		434.80		
	<i>from 01.020102</i>	434.80		
HORIZON-MSCA-2024-DN-01			608.60	
	<i>from 01.020102</i>		608.60	
HORIZON-MSCA-2025-DN-01				597.80
	<i>from 01.020102</i>			597.80
HORIZON-MSCA-2023-PF-01		260.47		
	<i>from 01.020102</i>	260.47		
HORIZON-MSCA-2024-PF-01			417.18	
	<i>from 01.020102</i>		417.18	
HORIZON-MSCA-2025-PF				404.29
	<i>from 01.020102</i>			404.29
HORIZON-MSCA-2023-SE-01		78.50		
	<i>from 01.020102</i>	78.50		
HORIZON-MSCA-2024-SE-01			99.47	

¹²⁴

The budget figures given in this table are rounded to two decimal places.

The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for years 2023, 2024 and 2025.

	<i>from</i> <i>01.020102</i>		99.47	
HORIZON-MSCA-2025-SE-01				97.71
	<i>from</i> <i>01.020102</i>			97.71
HORIZON-MSCA-2023-COFUND-01		96.57		
	<i>from</i> <i>01.020102</i>	96.57		
HORIZON-MSCA-2024-COFUND-01			104.80	
	<i>from</i> <i>01.020102</i>		104.80	
HORIZON-MSCA-2025-COFUND-01				105.56
	<i>from</i> <i>01.020102</i>			105.56
HORIZON-MSCA-2025-COFUND-02				22.50
	<i>from</i> <i>01.020102</i>			22.50
HORIZON-MSCA-2023-CITIZENS-01		15.42		
	<i>from</i> <i>01.020102</i>	15.42		
HORIZON-MSCA-2025-CITIZENS-01				16.25
	<i>from</i> <i>01.020102</i>			16.25
HORIZON-MSCA-2023-FTP-01		2.00		
	<i>from</i> <i>01.020102</i>	2.00		
HORIZON-MSCA-2024-NCP-01			2.00	
	<i>from</i> <i>01.020102</i>		2.00	
HORIZON-MSCA-2024-INCO-01			2.00	
	<i>from</i>		2.00	

	01.020102			
HORIZON-MSCA-2024-RR-01			1.50	
	from 01.020102		1.50	
HORIZON-MSCA-2024-FTP-01			2.00	
	from 01.020102		2.00	
HORIZON-MSCA-2025-MSCA4UA-01				10.00
	from 01.020102			10.00
Other actions				
Grant to identified beneficiary according to Financial Regulation Article 195(e)		0.35	14.15	0.15
	from 01.020102	0.35	14.15	0.15
Public procurement		0.50	0.50	0.50
	from 01.020102	0.50	0.50	0.50
Expert contract action		0.50	0.50	0.50
	from 01.020102	0.50	0.50	0.50
Estimated total budget		889.10	1252.70	1255.27

Specific conditions for the Marie Skłodowska-Curie Actions¹²⁵

DEFINITIONS

The following definitions apply:

'Academic sector' means public or private higher education establishments awarding academic degrees, public or private non-profit research organisations¹²⁶ and International European Research Organisations (IERO)¹²⁷.

'Non-academic sector' means any socio-economic actor not included in the academic sector and fulfilling the requirements of the Horizon Europe Rules for Participation.

'Associated partners' are entities which participate in the action, but without the right to charge costs or claim contributions. They contribute to the implementation of the action, but do not sign the grant agreement. Associated partners may not employ the researchers under the action¹²⁸.

'Associated partners linked to a beneficiary' are organisations with an established capital or legal link with the beneficiary, which is not limited to the action nor specifically created for its implementation. These entities implement action tasks described in Annex 1 of the grant agreement, i.e. hosting and training of researchers in Doctoral Networks and Postdoctoral Fellowships and hosting and seconding staff in Staff Exchanges. The associated partners linked to a beneficiary do not have the right to claim unit contributions and may not employ the researcher under the action. In addition, they must fulfil the eligibility conditions¹²⁹ for participation and funding applicable to the beneficiary they are linked to. The type of link and involvement of such entities must be clearly described in the proposal and will be assessed as part of the evaluation.

'Beneficiaries' are the legal entities that sign the grant agreement (either directly or through an accession form) and have the responsibility for the proper implementation of the action. They contribute directly to the implementation of the research, transfer of knowledge and training activities. Depending on the type of MSCA action, this involves recruiting,

¹²⁵ These conditions only apply to the 2024 and 2025 calls of this Work Programme. For the conditions applying to the 2023 calls, please see the Work Programme version adopted on 6 December 2022 (European Commission Decision C(2022)7550).

¹²⁶ If requested by the granting authority, institutions with self-declared research organisations status must provide evidence that their main objective is to carry out research and/or technological development. An assessment will be made on the basis of indicators such as share of research budget, volume of scientific publications and/or registered patents.

¹²⁷ 'International European Research Organisation' (IERO) means an international organisation, the majority of whose members are EU Member States or Horizon Europe Associated Countries, and whose principal objective is to promote scientific and technological cooperation in Europe (see Article 2(15) of the Regulation establishing Horizon Europe - the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination).

¹²⁸ For Global Postdoctoral Fellowships and COFUND Postdoctoral Programmes outgoing phase, this restriction does not apply. The associated partner hosting the outgoing phase can conclude an additional employment contract with the researcher to ensure adequate medical/social insurance in the outgoing country.

¹²⁹ See specific conditions at the end of this Work Programme part.

supervising, hosting, training or seconding researchers/research staff or managing and/or funding programmes.

‘Implementing partners’ means third parties implementing the MSCA COFUND Doctoral or Postdoctoral programmes by recruiting researchers. Implementing partners can receive financial support from the beneficiary. Implementing partners that are identified in the proposal must include a letter of commitment before the signature of the grant agreement to ensure their active participation in the action. The involvement of any implementing partner for which no such evidence of commitment is submitted will not be taken into account.

‘Interdisciplinarity’ means the integration of information, data, techniques, tools, perspectives, concepts or theories from two or more scientific disciplines. The term discipline refers to the first level of MSCA keywords¹³⁰.

1. MSCA DOCTORAL NETWORKS

1.1. Applicable unit contributions¹³¹

The EU contribution for MSCA Doctoral Networks will take the form of unit contributions, as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme¹³².

The following budget categories apply:

MSCA Doctoral Networks	Contributions for recruited researchers					Institutional unit contributions	
	per person-month					per person-month	
	Living allowance	Mobility allowance	Family allowance (if applicable)	Long-term leave allowance (if applicable)	Special needs allowance (if applicable)	Research, training and networking contribution	Management and indirect contribution
	EUR 4010	EUR 710	EUR 660	EUR 4720 x % covered by the beneficiary	requested unit ¹³³ x (1/number of months)	EUR 1600	EUR 1200

¹³⁰ [MSCA Keywords.pdf \(europa.eu\)](#)

¹³¹ These conditions only apply to the 2024 and 2025 calls of this Work Programme. For the conditions applying to the 2023 calls, please see the Work Programme version adopted on 6 December 2022 (European Commission Decision C(2022)7550).

¹³² The indicative budget includes budget provisions for the increase of the maximum EU contribution for grants funded under Horizon Europe MSCA Doctoral Networks calls in line with the provisions of the decision authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme.

¹³³ The pre-defined categories are as follows: EUR 3 000, EUR 4 500, EUR 6 000, EUR 9 500, EUR 13 000, EUR 18 500, EUR 27 500, EUR 35 500, EUR 47 500 and EUR 60 000.

A country correction coefficient applies to the living allowance in order to ensure equal treatment and purchasing power parity for all researchers. This coefficient is the one applicable to the country of the recruiting beneficiary (see Table 1 at the end of this Work Programme part). The living allowance is a gross amount, including compulsory deductions under national law, such as employer and employee social security contributions and direct taxes. The beneficiary must recruit each eligible doctoral candidate under an employment contract or equivalent direct contract, including an instrument of appointment (e.g., for permanent staff and/or officials), with full social security coverage (including sickness, parental, unemployment and invalidity benefits, pension rights, benefits in respect of accidents at work and occupational diseases). An exemption from this rule can be accepted only in cases where national legislation or the equivalent internal regulations of International European Research Organisations (IERO), entities created under Union law, or an international organisation, prohibit this possibility and subject to the prior agreement of the granting authority.

When an employment contract or instrument of appointment cannot be provided, the beneficiary may exceptionally recruit the doctoral candidate under a 'fixed-amount fellowship'. In this case, the living allowance will be halved, and the beneficiary must ensure that the doctoral candidate enjoys minimum social security coverage (including sickness, parental and invalidity benefits, and benefits for accidents at work and occupational diseases).

The beneficiary must pay to the doctoral candidates at least the amount of the **living allowance** (minus all compulsory deductions under national legislation). A top-up may be paid to the researchers in order to complement this contribution. In addition to the living allowance, all doctoral candidates must receive a **mobility allowance**. This allowance covers their additional, private mobility-related costs (e.g. travel and accommodation costs), not their professional costs under the action, which are covered by the research, training and networking contribution.

If the recruited doctoral candidate has or acquires family obligations during the action duration, i.e. persons linked to him/her by (i) marriage, or (ii) a relationship with equivalent status to a marriage recognised by the legislation of the country or region where this relationship was formalised; or (iii) dependent children who are actually being maintained by the researcher, the **family allowance** must be paid to him/her as well.

The **long-term leave allowance** contributes to the personnel costs incurred by the beneficiaries in case of the researchers' leave, including maternity, paternity, parental, sick or special leave, longer than 30 consecutive days. The **special needs allowance** contributes to the additional costs for the acquisition of special needs items and services for researchers with disabilities, whose long-term physical, mental, intellectual or sensory impairments¹³⁴ are certified by a competent national authority, and of such nature that their participation in the action may not be possible without them (e.g. assistance by third persons, adaptation of work environment, additional travel/transportation costs). These special needs items or services

¹³⁴ See Article 1 of the UN Convention on the Rights of Persons with Disabilities.

must not have been funded from another source (e.g. social security or health insurance). Both long-term leave and special needs allowances should be requested when the need arises. The **research, training and networking contribution** should cover, for example, costs for training and networking activities that contribute directly to the researchers' career development (e.g. participation in conferences, trips related to work on the action, training, language courses, seminars, lab material, books, library records, publication costs), research expenses, visa-related fees and travel expenses, additional costs arising from each secondment of six months or less, which require mobility from the place of residence (e.g. travel and accommodation costs).

The **management and indirect contribution** should cover the beneficiary's additional costs in connection with the action (e.g. personnel costs for project management/coordination, indirect costs).

The above rates apply to doctoral candidates devoting themselves to their project on a full-time basis. Researchers may, in agreement with the supervisor and beneficiary and with prior approval by the granting authority, implement their project on a part-time basis. Such a request is limited to personal or family reasons. In cases of part-time work, the doctoral candidates must work at least 50% of the full working time in their recruiting organisation for the action funded by the MSCA¹³⁵. The recruiting beneficiary should report costs as pro rata of the applicable full-time unit contributions.

1.2. Admissibility

The following exception to the General Annex A applies:

- The page limit of the application is 30 pages (excluding annexes).

1.3. Eligibility

Given the specific nature of MSCA Doctoral Networks, the following exceptions and additional eligibility criteria apply. This section also contains eligibility conditions, which apply during action implementation but cannot be verified at proposal stage.

- All proposals must indicate if they are resubmitted from the previous MSCA Doctoral Networks call under Horizon Europe.
- Proposals submitted to the previous call of MSCA Doctoral Networks under Horizon Europe and having received a score of less than 80% must not be resubmitted the following year.
- Any proposal involving 70% or more of the same recruiting organisations as in another proposal submitted to the previous call of the MSCA Doctoral Networks under Horizon Europe that has received a score of less than 80% will be assessed for whether it is a resubmission, irrespectively of the applicants' self-declaration. The assessment will be carried out by external expert evaluators based on the similarity of

¹³⁵ An exception to this limit may be granted for medical reasons.

objectives as well as on the similarity of the scientific approach proposed to reach such objectives.

1.3.1. Participating organisations

- Applications must be submitted by a consortium including at least three independent legal entities, each established in a different EU Member State or Horizon Europe Associated Country and with at least one of them established in an EU Member State. Should none of them be entitled to award a doctoral degree, a university or a consortium/grouping of academic/research institutions entitled to award a doctoral degree must be added to the project as an associated partner or an associated partner linked to a beneficiary.
- Not more than 40.0% of the EU contribution may be allocated to beneficiaries in the same country or to a single International European Research Organisation (IERO) or international organisation.
- International organisations with headquarters in an EU Member State or Horizon Europe Associated Country will be deemed to be established in this Member State or Associated Country.
- Affiliated entities are not allowed to participate as they cannot claim costs in MSCA Doctoral Networks.
- All beneficiaries must recruit at least one doctoral candidate. They are required to host at their premises and supervise recruited researchers, or use associated partners linked to them to do so¹³⁶.
- In order to reach the objectives of Joint Doctorates, at least three independent legal entities must be entitled to award doctoral degrees. At least one¹³⁷ of the institutions conferring a joint, double or multiple doctoral degree must be established in an EU Member State and/or Horizon Europe Associated Country. An applicant from the academic sector, which has transferred the right of awarding a doctoral degree to a consortium/grouping of academic/research institutions to which it belongs to, is also eligible. Applicants must provide, at the time of the submission of the proposal, a pre-agreement to award a joint, double or multiple degree to the doctoral candidate(s). The proposal should indicate from which institutions a researcher is expected to receive the degree(s).
- Joint Doctorates must set up a joint governance structure with joint admission, selection, supervision, monitoring and assessment procedures.

¹³⁶ In exceptional cases, where a beneficiary is established in a country different from the place where the recruited researcher is hosted, the country correction coefficient of the hosting entity is taken into account during the grant agreement preparation process, in order to ensure the correct budget calculation.

¹³⁷ These conditions only apply to the 2024 and 2025 calls of this Work Programme. For the conditions applying to the 2023 call, please see the Work Programme version adopted on 6 December 2022 (European Commission Decision C(2022)7550).

1.3.2. Recruited researchers

- Supported researchers must be **doctoral candidates**, i.e. not already in possession¹³⁸ of a doctoral degree at the date of the recruitment.
- Researchers must be enrolled in a doctoral programme leading to the award of a doctoral degree in at least one EU Member State or Horizon Europe Associated Country.
- Recruited researchers can be of any nationality and must comply with the following **mobility rule**: they must not have resided or carried out their main activity¹³⁹ (work, studies, etc.) in the country of the recruiting beneficiary for more than 12 months in the 36 months immediately before their recruitment date.

For 'International European Research Organisations' (IERO), 'international organisations', or entities created under Union law, the researchers must not have spent more than 12 months in the 36 months immediately before their recruitment in the same appointing organisation.

Compulsory national service, short stays such as holidays and time spent by the researcher as part of a procedure for obtaining refugee status under the Geneva Convention¹⁴⁰ are not taken into account.

- Secondments are eligible for up to one third of the actual months spent implementing the research training activities under the action. This limitation does not apply in the case of Industrial Doctorates and Joint Doctorates.
- In case of industrial doctorates, doctoral candidates must spend at least 50% of their fellowship duration in the non-academic sector.

1.3.3. Duration of the action

- The duration of the action must not exceed 48 months from the starting date set out in the grant agreement (including the time needed to recruit and select the doctoral candidates), except in the case of joint doctorates where this maximum duration is 60 months.
- The duration of each fellowship (on the basis of full-time employment) is minimum 3 and maximum 36 months, except in the case of joint doctorates, where this maximum duration is 48 months.
- The overall EU contribution for MSCA Doctoral Networks actions is limited to a maximum of 540 person-months.

¹³⁸ Researchers who have successfully defended their doctoral thesis but who have not yet formally been awarded the doctoral degree will not be considered eligible.

¹³⁹ Country of the main activity: the country where the researcher is physically based when carrying out the main activity and the country of the institution for which the main activity is performed (e.g., employer)

¹⁴⁰ 1951 Refugee Convention and the 1967 Protocol.

1.4. Award criteria

- Proposals will be evaluated by experts on the basis of the **award criteria** 'excellence', 'impact' and 'quality and efficiency of the implementation'.
- Evaluation scores will be awarded for each of these criteria, and not for the different aspects listed in the table below. Each criterion will be scored out of 5. Scores will be awarded with a resolution of one decimal place and will be subject to a weighting factor as indicated in the table below.
- Proposals scoring equal to or above 70% will be considered for funding — within the limits of the available call budget. Other proposals will be rejected.

Excellence	Impact	Quality and efficiency of the implementation
Quality and pertinence of the project's research and innovation objectives (and the extent to which they are ambitious, and go beyond the state of the art)	Contribution to structuring doctoral training at the European level and to strengthening European innovation capacity, including the potential for: a) meaningful contribution of the non-academic sector to the doctoral training, as appropriate to the implementation mode and research field b) developing sustainable elements of doctoral programmes	Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages
Soundness of the proposed methodology (including interdisciplinary approaches, consideration of the gender dimension and other diversity aspects if relevant for the research project, and the quality of open science practices)	Credibility of the measures to enhance the career perspectives and employability of researchers and contribution to their skills development	Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise

Excellence	Impact	Quality and efficiency of the implementation
Quality and credibility of the training programme (including transferable skills, inter/multidisciplinary inter-sectoral and gender as well as other diversity aspects)	Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities	
Quality of the supervision (including mandatory joint supervision for industrial and joint doctorate projects)	The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts	
50%	30%	20%
Weighting		

1.5. Procedure

- Proposals must be submitted to only one of eight 'main evaluation panels': Chemistry (CHE), Social Sciences and Humanities (SOC), Economic Sciences (ECO), Information Science and Engineering (ENG), Environment and Geosciences (ENV), Life Sciences (LIF), Mathematics (MAT), Physics (PHY). Industrial and joint doctorates will be ranked in the scientific panel of submission. Each panel will establish a ranked list.
- The distribution of the indicative budget of the call will be proportional to the number of eligible proposals received in each panel. If the budget allocated to any panel exceeds the requirements of all proposals positively evaluated¹⁴¹ in that panel, the excess budget will be reallocated to the other panels based on the distribution described above. Equally, if the allocated funding to a panel is insufficient to fund the highest ranked proposal in that panel, the necessary budget will be transferred from the other panels based on the distribution described above, in order to ensure that the highest ranked proposal can be funded. In order to ensure budget optimisation and an equitable success rate across panels, the excess budget remaining after the initial allocation of funding to the proposals in the panels may be transferred between panels.

Ex-aequo Proposals

- When the total scores of two or more proposals are equal (ex-aequo cases), the priority order will be established as follows:

¹⁴¹ Measured as proposals having passed all relevant evaluation thresholds.

1. The proposals will be prioritised according to the scores they have been awarded for the criterion ‘Excellence’. When these scores are equal, priority will be based on scores for the criterion ‘Impact’.
2. If necessary, the gender balance among the supervisors named in the proposal will be used as a factor for prioritisation.
3. If a distinction still cannot be made, the panel may decide to further prioritise by considering other factors such as environmental considerations in line with the MSCA Green Charter, gender and other diversity aspects in the research activities, participation of the non-academic sector (including involvement of SMEs), geographical diversity¹⁴², international cooperation, favourable employment and working conditions or relationship to the Horizon Europe objectives in general. These factors will be documented in the panel report.

1.6. Legal and financial set-up of the Grant Agreements

The following exceptions and additional conditions apply:

- Eligible costs must take the form of unit contributions, as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme.
- When associated partners are involved, beneficiaries are encouraged to sign a partnership agreement with them to regulate the internal relationship between all participating organisations. The partnership agreement(s) must comply with the grant agreement.
- Beneficiaries must ensure full access — on a royalty-free basis — for the recruited researchers to background and results needed for their activities under the action.
- The following deliverables will have to be submitted for grants awarded under this topic:
 - establishment of a **supervisory board** of the network;
 - **progress report** submitted within 30 days after one year from the starting date of the action;
 - **mid-term meeting** organised between the participants and the granting authority;
 - **mobility declaration** submitted within 20 days after the recruitment of each researcher and updated (if needed) via the Funding & Tenders Portal Continuous Reporting tool;
 - **career development plan**: a document describing how the individual Career Development Plans have been established (listing also the researchers for whom such plans have been put in place), submitted before the mid-term meeting;

¹⁴² Defined as the number of EU Member States or Associated Countries represented in the proposals, not otherwise receiving funds from projects higher up the ranking list (and if equal in number, then by budget).

- **evaluation questionnaire** completed by each recruited researcher and submitted at the end of the research training activity; a **follow-up questionnaire** submitted two years later;
- **data management plan** submitted at mid-term and an update towards the end of the project if needed;
- **plan for the dissemination and exploitation of results, including communication activities**, submitted at mid-term and an update towards the end of the project.

2. MSCA POSTDOCTORAL FELLOWSHIPS

2.1. Applicable unit contributions¹⁴³

The EU contribution for MSCA Postdoctoral Fellowships will take the form of unit contributions, as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme¹⁴⁴.

The following budget categories apply:

MSCA Postdoctoral Fellowships	Contributions for the recruited researcher per person-month					Institutional unit contributions per person-month	
	Living allowance	Mobility allowance	Family allowance (if applicable)	Long-term leave allowance (if applicable)	Special needs allowance (if applicable)	Research, training and networking contribution	Management and indirect contribution
	EUR 5990	EUR 710	EUR 660	EUR 6700 x % covered by the beneficiary	requested unit ¹⁴⁵ x (1/number of months)	EUR 1000	EUR 650

¹⁴³ These conditions only apply to the 2024 and 2025 calls of this Work Programme. For the conditions applying to the 2023 calls, please see the Work Programme version adopted on 6 December 2022 (European Commission Decision C(2022)7550).

¹⁴⁴ The indicative budget includes budget provisions for the increase of the maximum EU contribution for grants funded under Horizon Europe MSCA Postdoctoral Fellowships calls in line with the provisions of the decision authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme.

¹⁴⁵ The pre-defined categories are as follows: EUR 3 000, EUR 4 500, EUR 6 000, EUR 9 500, EUR 13 000, EUR 18 500, EUR 27 500, EUR 35 500, EUR 47 500 and EUR 60 000.

A country correction coefficient applies to the living allowance in order to ensure equal treatment and purchasing power parity for all researchers¹⁴⁶. For European Postdoctoral Fellowships, this coefficient is the one applicable to the country of the beneficiary. For the Global Postdoctoral Fellowships two different country correction coefficients apply:

- For the outgoing phase: the coefficient of the country where the postdoctoral researcher is hosted (i.e. the country of the associated partner hosting the outgoing phase);
- For the return phase: the coefficient of the country where the postdoctoral researcher returns to (i.e. the country of the beneficiary).

The country correction coefficients are listed in Table 1 at the end of this Work Programme part. The living allowance is a gross amount, including compulsory deductions under national law, such as employer and employee social security contributions and direct taxes.

The beneficiary must recruit the postdoctoral researcher under an employment contract or equivalent direct contract, including an instrument of appointment (e.g., for permanent staff and/or officials), with full social security coverage (including sickness, parental, unemployment and invalidity benefits, pension rights, benefits in respect of accidents at work and occupational diseases). An exemption from this rule can be accepted only in cases where national legislation or the equivalent internal regulations of International European Research Organisations (IERO), entities created under Union law, or an international organisation, prohibit this possibility and subject to the prior agreement of the granting authority.

When an employment contract or instrument of appointment cannot be provided, the beneficiary may exceptionally recruit the postdoctoral researcher under a 'fixed-amount fellowship'. In this case, the living allowance will be halved, and the beneficiary must ensure that the postdoctoral researcher enjoys minimum social security coverage (including sickness, parental and invalidity benefits, and benefits for accidents at work and occupational diseases).

The beneficiary must pay to the postdoctoral researcher at least the amount of the **living allowance** (minus all compulsory deductions under national legislation). A top-up may be paid to the researcher in order to complement this contribution. In addition to the living allowance, the postdoctoral researcher must receive a **mobility allowance**. This allowance covers his/her additional, private mobility-related costs (e.g. travel and accommodation costs), not professional costs under the action, which are covered by the research, training and networking contribution.

If the postdoctoral researcher has or acquires family obligations during the action duration, i.e. has persons linked to him/her by (i) marriage, or (ii) a relationship with equivalent status

¹⁴⁶ In exceptional cases, where a beneficiary is established in a country different from the place where the recruited researcher is hosted, the country correction coefficient of the hosting entity is taken into account during the grant agreement preparation process, in order to ensure the correct budget calculation.

to a marriage recognised by the legislation of the country or region where this relationship was formalised; or (iii) dependent children who are actually being maintained by the researcher, the **family allowance** must be paid to him/her as well.

The **long-term leave allowance** contributes to the personnel costs incurred by the beneficiary in case of the researcher's leave, including maternity, paternity, parental, sick or special leave, longer than 30 consecutive days. The **special needs allowance** contributes to the additional costs for the acquisition of special needs items and services for researchers with disabilities, whose long-term physical, mental, intellectual or sensory impairments¹⁴⁷ are certified by a competent national authority, and of such nature that their participation in the action may not be possible without them (e.g. assistance by third persons, adaptation of work environment, additional travel/transportation costs). These special needs items or services must not have been funded from another source (e.g. social security or health insurance). Both long-term leave and special needs allowances should be requested when the need arises.

The **research, training and networking contribution** should cover, for example, costs for training and networking activities that contribute directly to the researchers' career development (e.g. participation in conferences, trips related to work on the action, training, language courses, seminars, lab material, books, library records, publication costs), research expenses, visa-related fees and travel expenses, additional costs arising from optional secondments (e.g. travel and accommodation costs).

The **management and indirect contribution** should cover the beneficiary's additional costs in connection with the action (e.g. personnel costs for project management, indirect costs).

The above rates apply to postdoctoral researchers devoting themselves to their project on a full-time basis. Researchers may, in agreement with the supervisor and beneficiary and with prior approval by the granting authority, implement their project on a part-time basis. In addition to the possibility to request part-time work for personal or family reasons, postdoctoral fellows may opt to work part-time for professional reasons. These might include creating a company, pursuing another research project¹⁴⁸, or engaging in advanced studies not related to the MSCA grant. Part-time work for professional reasons is not allowed during the outgoing phase of the Global Postdoctoral Fellowships. Any professional activities carried out part-time in parallel with the MSCA action must be agreed upon by the researcher and the beneficiary and approved by the granting authority.

If the action is implemented on a part-time basis, the researcher must dedicate at least 50% of his/her working time to the action funded by the MSCA¹⁴⁹. The beneficiary should report costs as pro rata of the applicable full-time unit contributions.

2.2. Admissibility

The following exceptions to the General Annex A apply:

¹⁴⁷ See Article 1 of the UN Convention on the Rights of Persons with Disabilities.

¹⁴⁸ Part-time work cannot be requested in order to participate in another MSCA grant at the same time.

¹⁴⁹ An exception to this limit may be granted for medical reasons.

- The page limit of the application is 10 pages (excluding annexes).

2.3. Eligibility

Given the specific nature of MSCA Postdoctoral Fellowships, the following exceptions and additional eligibility criteria apply. This section also contains eligibility conditions, which apply during action implementation but cannot be verified at proposal stage.

- All domains of research and technological development are eligible for funding (including areas of research covered by the Euratom Research and Training Programme 2021-2025).
- Proposals involving the same recruiting organisation (and for Global Postdoctoral Fellowships also the associated partner hosting the outgoing phase) and individual researcher submitted to the previous call of MSCA Postdoctoral Fellowships under Horizon Europe and having received a score of less than 70% must not be resubmitted the following year.
- Only one proposal per individual researcher can be submitted. In case of several proposals involving the same individual researcher, only the last submitted one will be considered eligible.
- If proposals with the same research objectives and work plan are submitted for different researchers, only the first submitted one will be considered eligible.

2.3.1. Participating organisations

- Applications must be submitted by a single independent legal entity, established in an EU Member State or Horizon Europe Associated Country. This is a mono-beneficiary action.
- The associated partner hosting the outgoing phase in Global Postdoctoral Fellowships must include a letter of commitment in the proposal to ensure their active participation in the action.
- Applications in the research areas of research covered by the Euratom Research and Training Programme 2021-2025 must be submitted by a single independent legal entity, established in an EU Member State or a country associated to the Euratom Research and Training Programme 2021-2025. Nuclear-related proposals submitted by entities established in other countries will be ineligible¹⁵⁰.
- Affiliated entities are not allowed to participate as they cannot claim costs in MSCA Postdoctoral Fellowships.

¹⁵⁰ See Euratom Work Programme 2021-2025 and the Horizon Europe Programme guide available on the Funding and Tender Opportunities Portal (<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/reference-documents;programCode=HORIZON>) for up-to-date information on the current list of countries associated to the Euratom Programme.

- International organisations with headquarters in an EU Member State or Horizon Europe Associated Country will be deemed to be established in this Member State or Associated Country.
- The beneficiary must employ and supervise the researcher during the action.

2.3.2. *Recruited researchers*

- Supported fellows must be **postdoctoral researchers** at the date of the call deadline, i.e. in a possession of a doctoral degree¹⁵¹. Applicants who have successfully defended their doctoral thesis but who have not yet formally been awarded the doctoral degree will also be considered as postdoctoral researchers and will be considered eligible to apply. The successful defence must be unconditional (no further requirements/corrections that need to be addressed) and take place before the call deadline. Supporting documentation may be requested.
- At the call deadline, supported researchers must have a **maximum of 8 years full-time equivalent experience in research**, measured from the date of award of the doctoral degree. Years of experience outside research and career breaks (e.g. due to parental leave¹⁵²), will not count towards the amount of research experience. For nationals or long-term residents of EU Member States or Horizon Europe Associated Countries who wish to reintegrate to pursue their research career in EU Member States or Horizon Europe Associated Countries, years of experience in research in third countries will not be considered in the above maximum.
- Recruited researchers must comply with the following **mobility rule**: they must not have resided or carried out their main activity¹⁵³ (work, studies, etc.) in the country of the beneficiary (for European Postdoctoral Fellowships), or the host organisation for the outgoing phase (for Global Postdoctoral Fellowships) for more than 12 months in the 36 months immediately before the call deadline.

Researchers wishing to reintegrate from a third country must either be based in a third country at the call deadline or have moved directly from a third country to an EU Member State or Horizon Europe Associated Country within the last 12 months before the call deadline.

¹⁵¹ A medical doctor degree will be accepted only when it corresponds to a doctoral degree or if the researcher can demonstrate his/her appointment in a position that requires doctoral equivalency (e.g. professorship appointment). Medical doctor degrees corresponding to basic medical training as defined in Annex V of Directive 2005/36/EC will not be considered a doctoral degree

¹⁵² Maternity: for each child born within the above-mentioned eligibility period of 8 years, 18 months will be deducted from the experience in research unless the applicant can document a longer parental leave prior to the call deadline. Paternity: for each child born within the above-mentioned eligibility period of 8 years, the documented time of parental leave taken until the call deadline will be deducted from the experience in research.

¹⁵³ Country of the main activity: the country where the researcher is physically based when carrying out the main activity and the country of the institution for which the main activity is performed (e.g., employer).

For 'International European Research Organisations' (IERO), 'international organisations', or entities created under Union law, the researchers must not have spent more than 12 months in the 36 months immediately before the call deadline, in the same appointing organisation.

Compulsory national service, short stays such as holidays and time spent as part of a procedure for obtaining refugee status under the Geneva Convention¹⁵⁴ are not taken into account.

- Supported **researchers can be of any nationality**. However, researchers going to a third country ('Global Postdoctoral Fellowship) or researchers who wish to reintegrate to Europe (i.e. in an EU Member State or Horizon Europe Associated Country), must be nationals or long-term residents of EU Member States or Horizon Europe Associated Countries. Long-term residence means a period of legal and continuous residence within EU Member States or Horizon Europe Associated Countries of at least five consecutive years. Absences of less than six consecutive months and no more than ten months over the whole period are permitted when calculating the five years.

Researchers who are refugees in an EU Member State or Horizon Europe Associated Country according to the Geneva Convention may also apply to both European and Global Postdoctoral Fellowships, irrespective of whether they are long-term residents or not, if they fulfil the other eligibility conditions.

- Applicants in the research areas covered by the Euratom Research and Training Programme 2021-2025 must recruit nationals or long-term residents of an EU Member State or a country associated to the Euratom Research and Training Programme 2021-2025

2.3.3. Duration of the action

- European Postdoctoral Fellowships should last between 12 and 24 months. Global Postdoctoral Fellowships should last between 24 and 36 months, consisting of 12 to 24 months for the outgoing phase and 12 months for the return phase.
- If requested and justified in the proposal, an **additional period of up to six months at the end of the project** can be awarded to researchers who will spend that period in a non-academic organisation established in an EU Member State or Horizon Europe Associated Country.

2.4. Award criteria

- Proposals will be evaluated by experts on the basis of the **award criteria** 'excellence', 'impact' and 'quality and efficiency of the implementation'.

¹⁵⁴ 1951 Refugee Convention and the 1967 Protocol.

- Evaluation scores will be awarded for each of these criteria, and not for the different aspects listed in the table below. Each criterion will be scored out of 5. Scores will be awarded with a resolution of one decimal place and will be subject to a weighting factor as indicated in the table below.
- Proposals scoring equal to or above 70% will be considered for funding — within the limits of the available call budget. Other proposals will be rejected.

Excellence	Impact	Quality and efficiency of the implementation
Quality and pertinence of the project's research and innovation objectives (and the extent to which they are ambitious, and go beyond the state of the art)	Credibility of the measures to enhance the career perspectives and employability of the researcher and contribution to his/her skills development	Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages
Soundness of the proposed methodology (including interdisciplinary approaches, consideration of the gender dimension and other diversity aspects if relevant for the research project, and the quality of open science practices)	Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities	Quality and capacity of the host institutions and participating organisations, including hosting arrangements
Quality of the supervision, training and of the two-way transfer of knowledge between the researcher and the host	The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts	
Quality and appropriateness of the researcher's professional experience, competences and skills		
50%	30%	20%
Weighting		

2.5. Procedure

In Postdoctoral Fellowships, proposals will be evaluated by one of eight 'main evaluation panels': Chemistry (CHE), Social Sciences and Humanities (SOC), Economic Sciences (ECO), Information Science and Engineering (ENG), Environment and Geosciences (ENV), Life Sciences (LIF), Mathematics (MAT), Physics (PHY). Each panel will establish two ranked lists, one for European and one for Global Postdoctoral Fellowships.

European and Global Postdoctoral Fellowships will have separate budgets. The distribution of respective available funds will be proportional to the number of eligible proposals received in each main evaluation panel. If the budget allocated to any panel exceeds the requirements of all proposals positively evaluated¹⁵⁵ in that panel, the excess budget will be reallocated to the other panels based on the distribution as above. Equally, if the allocated funding to a panel is insufficient to fund the highest ranked proposal in that panel, the necessary budget will be transferred from the other panels based on the distribution as above, in order to ensure that the highest ranked proposal can be funded. In order to ensure budget optimisation and an equitable success rate across panels, the excess budget remaining after the initial allocation of funding to the proposals in the panels may be transferred between panels.

Ex-aequo Proposals

- When the total scores of two or more proposals are equal (ex-aequo cases), the priority order will be established as follows:
 1. The proposals will be prioritised according to the scores they have been awarded for the criterion 'Excellence'. When these scores are equal, priority will be based on scores for the criterion 'Impact'.
 2. If necessary, the gender balance among successful applicant researchers will be used as a factor for prioritisation.

If a distinction still cannot be made, the panel may decide to further prioritise by considering other factors such as environmental considerations in line with the MSCA Green Charter, gender and other diversity aspects in the research activities, participation of the non-academic sector (including involvement of SMEs), geographical diversity¹⁵⁶, favourable employment and working conditions or relationship to the Horizon Europe objectives in general. These factors will be documented in the panel report.

Seal of Excellence

- Seals of Excellence will be awarded to applications with a total score **equal to or higher than 85%**, but which cannot be funded due to lack of budget available to the call.

¹⁵⁵ Measured as proposals having passed all relevant evaluation thresholds.

¹⁵⁶ Defined as the number of EU Member States or Associated Countries represented in the proposal, not otherwise receiving funds from projects higher up the ranking list (and if equal in number, then by budget).

2.6. Legal and Financial set-up of the Grant Agreements

The following exceptions and additional conditions apply:

- Eligible costs must take the form of unit contributions, as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme.
- When associated partners are involved, the beneficiary is encouraged to sign a partnership agreement with them to regulate the internal relationship between all participating organisations. The partnership agreement(s) must comply with the grant agreement.
- The beneficiary must ensure full access — on a royalty-free basis — for the recruited researcher to background and results needed for his/her activities under the action.
- The following deliverables will have to be submitted for grants awarded under this topic:
 - **mobility declaration** submitted within 20 days of the start of the research training activities and updated (if needed) via the Funding & Tenders Portal Continuous Reporting tool;
 - **career development plan** of the recruited researcher, submitted at the beginning of the action (not later than 6 months after its start) and updated if needed throughout the project;
 - **evaluation questionnaire** completed by the recruited researcher and submitted at the end of the research training activity; a **follow-up questionnaire** submitted two years later;
 - **data management plan** submitted within the first 6 months of the project;
 - **plan for the dissemination and exploitation of results** submitted towards the end of the project.

3. MSCA STAFF EXCHANGES

3.1. Applicable unit contributions¹⁵⁷

The EU contribution for MSCA Staff Exchanges will take the form of unit contributions, as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme¹⁵⁸.

¹⁵⁷ These conditions only apply to the 2024 and 2025 calls of this Work Programme. For the conditions applying to the 2023 calls, please see the Work Programme version adopted on 6 December 2022 (European Commission Decision C(2022)7550).

¹⁵⁸ The indicative budget includes budget provisions for the increase of the maximum EU contribution for grants funded under Horizon Europe MSCA Staff Exchanges calls in line with the provisions of the

The following budget categories apply:

MSCA Staff Exchanges	Contributions for seconded staff members per person-month		Institutional contributions per person-month	
	Top-up allowance	Special needs allowance (if applicable)	Research, training and networking contribution	Management and indirect contribution
	EUR 2710	requested unit ¹⁵⁹ x (1/number of months)	EUR 1300	EUR 1000

The **top-up allowance** for the seconded staff member contributes to travel, accommodation and subsistence costs related to the secondment.

The **special needs allowance** contributes to the additional costs for the acquisition of special needs items and services for staff members with disabilities, whose long-term physical, mental, intellectual or sensory impairments¹⁶⁰ are certified by a competent national authority, and of such nature that their participation in the action may not be possible without them (e.g. assistance by third persons, adaptation of work environment, additional travel/transportation costs). These special needs items or services must not have been funded from another source (e.g. social security or health insurance). The special needs allowance should be requested when the need arises.

The **research, training and networking contribution** should cover costs for training, transfer of knowledge and networking activities, as well as research expenses.

The **management and indirect contribution** should cover the beneficiary's additional costs in connection with the action (e.g. personnel costs for project management/coordination, indirect costs).

3.2. Admissibility

The following exception to the General Annex A applies:

- The page limit of the application is 30 pages (excluding annexes).

decision authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme.

¹⁵⁹ The pre-defined categories are as follows: EUR 3 000, EUR 4 500, EUR 6 000, EUR 9 500, EUR 13 000, EUR 18 500, EUR 27 500, EUR 35 500, EUR 47 500 and EUR 60 000.

¹⁶⁰ See Article 1 of the UN Convention on the Rights of Persons with Disabilities.

3.3. Eligibility

Given the specific nature of MSCA Staff Exchanges, the following exceptions and additional eligibility criteria apply. This section also contains eligibility conditions, which apply during action implementation but cannot be verified at proposal stage.

3.3.1. *Participating organisations*

- Applications must be submitted by a consortium including at least three independent legal entities in three different countries, two of which established in a different EU Member State or Horizon Europe Associated Country.
- International organisations with headquarters in an EU Member State or Horizon Europe Associated Country will be deemed to be established in this Member State or Associated Country.
- The European Commission Joint Research Centre (JRC) may participate as member of the consortium selected for funding.
- Affiliated entities are not allowed to participate as they cannot claim costs in MSCA Staff Exchanges.
- Only legal entities that are established in EU Member States or Horizon Europe Associated Countries can be beneficiaries.
- If all participating organisations are from the same sector (i.e. either only academic or only non-academic), there must be at least one organisation from a non-associated Third Country.
- Secondments within EU Member States or Horizon Europe Associated Countries must be between different sectors (academic and non-academic), except for interdisciplinary secondments, which must be limited to a maximum of one third of the total months spent under the action.
- For secondments from associated partners linked to a beneficiary, only the sector (academic or non-academic) of the beneficiary counts; the linked associated partners will be considered to belong to the same sector as their beneficiary.
- Secondments must be between different countries¹⁶¹; secondments between non-associated third countries are not eligible.

¹⁶¹ Secondments to and from branches and departments without separate legal personality that are part of legal entities established in EU Member States or Horizon Europe Associated Countries can take place with entities established in any country other than the country where they are physically located and the country of their mother legal entity.

- Secondments must be performed on a full-time basis.

3.3.2. *Seconded staff members*

- Secondments are open for researchers at any career stage (from doctoral candidates to postdoctoral researchers¹⁶²), as well as administrative, managerial and technical staff supporting R&I activities under the action.
- Supported staff members must be actively engaged in or linked to R&I activities for at least one month (full-time equivalent) at the sending institution before the first period of secondment.
- After the period of secondment, seconded staff should return to their sending institution, thus maximising the impact of the action for knowledge sharing and long-term collaboration.

3.3.3. *Duration of the action*

- The maximum duration of the project is 48 months from the starting date set out in the grant agreement.
- The overall EU contribution for MSCA Staff Exchanges amounts to a maximum of 360 person-months per project.
- Secondments must last at least one month and cannot be longer than 12 months for the same staff member (independently of the number of organisations the staff is seconded to).
- The secondment of a staff member may be split into several stays with one or several beneficiaries or associated partners.
- Secondments beyond the project duration cannot be funded.

3.4. Award criteria

- Proposals will be evaluated by experts on the basis of the **award criteria** 'excellence', 'impact' and 'quality and efficiency of the implementation'.
- Evaluation scores will be awarded for each of these criteria, and not for the different aspects listed in the table below. Each criterion will be scored out of 5. Scores will be awarded with a resolution of one decimal place and will be subject to a weighting factor as indicated in the table below.
- Proposals scoring equal to or above 70% will be considered for funding — within the limits of the available call budget. Other proposals will be rejected.

¹⁶² In possession of a doctoral degree. Possession of a doctoral degree is defined as a successfully defended doctoral thesis, even if the doctoral degree has yet to be awarded.

Excellence	Impact	Quality and efficiency of the implementation
Quality and pertinence of the project's research/innovation objectives (and the extent to which they are ambitious, and go beyond the state of the art)	Developing new and lasting research collaborations, achieving transfer of knowledge between participating organisations and contributing to improving research and innovation potential at the European and global level	Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages
Soundness of the proposed methodology (including international, inter-sectoral and interdisciplinary approaches, consideration of the gender dimension and other diversity aspects if relevant for the research project, and the quality of open science practices)	Credibility of the measures to enhance the career perspectives of staff members and contribution to their skills development	Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise
Quality of the proposed interaction between the participating organisations in light of the research and innovation objectives.	Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities	
	The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts.	
50%	30%	20%
Weighting		

3.5. Procedure

- Proposals will be evaluated by one of eight 'main evaluation panels': Chemistry (CHE), Social Sciences and Humanities (SOC), Economic Sciences (ECO), Information Science and Engineering (ENG), Environment and Geosciences (ENV),

Life Sciences (LIF), Mathematics (MAT), Physics (PHY). Each panel establishes a ranked list.

- The distribution of the indicative budget of the call will be proportional to the number of eligible proposals received in each panel. If the budget allocated to any panel exceeds the requirements of all proposals positively evaluated¹⁶³ in that panel, the excess budget will be reallocated to the other panels based on the distribution as above. Equally, if the allocated funding to a panel is insufficient to fund the highest ranked proposal in that panel, the necessary budget will be transferred from the other panels based on the distribution as above, in order to ensure that the highest ranked proposal can be funded. In order to ensure budget optimisation and an equitable success rate across panels, the excess budget remaining after the initial allocation of funding to the proposals in the panels may be transferred between panels.

Ex-aequo Proposals

- When the total scores of two or more proposals are equal (ex-aequo cases), the priority order will be established as follows:
 1. The proposals will be prioritised according to the scores they have been awarded for the criterion ‘Excellence’. When these scores are equal, priority will be based on scores for the criterion ‘Impact’.
 2. If a distinction still cannot be made, the panel may decide to further prioritise by considering other factors such as environmental considerations in line with the MSCA Green Charter, gender and other diversity aspects in the research activities, participation of the non-academic sector (including involvement of SMEs), geographical diversity¹⁶⁴, international cooperation, favourable working/secondment conditions or relationship to the Horizon Europe objectives in general. These factors will be documented in the panel report.

3.6. Legal and financial set-up of the Grant Agreements

The following exceptions and additional conditions apply:

- Eligible costs must take the form of unit contributions, as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme.
- When associated partners are involved, beneficiaries are encouraged to sign a partnership agreement with them to regulate the internal relationship between all participating organisations. The partnership agreement(s) must comply with the grant agreement.

¹⁶³ Measured as proposals having passed all relevant evaluation thresholds.

¹⁶⁴ Defined as the number of EU Member States or Associated Countries represented in the proposal, not otherwise receiving funds from projects higher up the ranking list (and if equal in number, then by budget).

- Grants awarded under this topic might be linked to other actions funded by Horizon 2020 or Horizon Europe.
- Beneficiaries must ensure full access — on a royalty-free basis — for the staff members to background and results needed for their activities under the action.
- The following deliverables will have to be submitted for grants awarded under this topic:
 - **mid-term meeting** organised between the participants and the granting authority;
 - **progress report** submitted within 30 days after one year from the starting date of the action;
 - **mobility declaration** submitted within 20 days of the secondment of each seconded staff member, and updated (if needed) via the Funding & Tenders Portal Continuous Reporting tool;
 - **evaluation questionnaire** completed by the seconded staff members and submitted at the end of their secondments; a follow-up questionnaire submitted two years later;
 - **data management plan** submitted at mid-term and an update towards the end of the project if needed;
 - **plan for the dissemination and exploitation of results, including communication activities** submitted at mid-term and an update towards the end of the project.

4. MSCA COFUND

4.1. Applicable unit contributions¹⁶⁵

The EU contribution for MSCA COFUND will take the form of unit contributions, as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme¹⁶⁶.

The following budget categories apply:

MSCA COFUND	Contributions for recruited researchers and institutional contributions per person-month		
	COFUND allowance	Long-term leave allowance (if	Special needs allowance

¹⁶⁵ These conditions only apply to the 2024 and 2025 calls of this Work Programme. For the conditions applying to the 2023 calls, please see the Work Programme version adopted on 6 December 2022 (European Commission Decision C(2022)7550).

¹⁶⁶ The indicative budget includes budget provisions for the increase of the maximum EU contribution for grants funded under Horizon Europe MSCA COFUND calls in line with the provisions of the decision authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme.

			applicable)	(if applicable)
	Doctoral programmes	EUR 3300	EUR 3300 x % covered by the beneficiary	requested unit ¹⁶⁷ x (1/number of months)
	Postdoctoral programmes	EUR 4700	EUR 4700 x % covered by the beneficiary	

The **COFUND allowance** contributes to:

- costs of the researchers including the remuneration payable to the individual doctoral or postdoctoral researchers recruited under an employment contract/equivalent direct contract with full social security coverage and complying with the applicable social security legislation, as well as the mobility costs and, if applicable, the family costs, and/or
- costs related to the training, research expenses, transfer of knowledge and networking activities of researchers, costs of managing the action and indirect costs.

The **long-term leave allowance** contributes to the personnel costs incurred by the employer in case of the researchers' leave, including maternity, paternity, parental, sick or special leave, longer than 30 consecutive days. The **special needs allowance** contributes to the additional costs for the acquisition of special needs items and services for researchers with disabilities, whose long-term physical, mental, intellectual or sensory impairments¹⁶⁸ are certified by a competent national authority, and of such nature that their participation in the action may not be possible without them (e.g. assistance by third persons, adaptation of work environment, additional travel/transportation costs). These special needs items or services must not have been funded from another source (e.g. social security or health insurance). Both long-term leave and special needs allowances should be requested when the need arises.

The beneficiary or implementing partner must recruit each eligible researcher under an employment contract or 'equivalent direct contract' with full social security coverage (including sickness, parental, unemployment and invalidity benefits, pension rights, benefits in respect of accidents at work and occupational diseases). An exemption from this rule can be accepted only in cases where national legislation or the equivalent internal regulations of International European Research Organisations (IERO), entities created under Union law, or an international organisation, prohibit this possibility and subject to the prior agreement of the granting authority.

When an employment contract cannot be provided, the beneficiary or the implementing partner may exceptionally recruit the researcher under a 'fixed-amount fellowship'. In this

¹⁶⁷ The pre-defined categories are as follows: EUR 3 000, EUR 4 500, EUR 6 000, EUR 9 500, EUR 13 000, EUR 18 500, EUR 27 500, EUR 35 500, EUR 47 500 and EUR 60 000.

¹⁶⁸ See Article 1 of the UN Convention on the Rights of Persons with Disabilities.

case, the COFUND allowance will be halved and the beneficiary must ensure that the researcher enjoys minimum social security coverage (including sickness, parental and invalidity benefits, and benefits for accidents at work and occupational diseases).

In principle, researchers should be employed full-time. The above rates apply to researchers devoting themselves to their project on a full-time basis. Researchers may, in agreement with the supervisor and beneficiary and with prior approval by the granting authority, implement their project on a part-time basis. Part-time work due to professional reasons can be requested by COFUND postdoctoral researchers only.

In cases of part-time work, researchers must work at least 50% of the full working time in their recruiting organisation for the action co-funded by the MSCA, whether they are working part-time for family or other reasons¹⁶⁹. The beneficiary should report costs as pro rata of the applicable full-time unit contributions.

The EU contribution is limited to EUR 10 million per beneficiary per call. If an applicant submits two or more successful applications totalling more than EUR 10 million within one call, the applicant will be required to decide which of these proposals to implement.

The table above specifies the unit contributions for the co-funding of regional, national and international programmes. The EU contribution can be used to support any cost items of the programme (remuneration costs, mobility costs, family costs, research, training and networking costs, management and indirect costs). Individual cost items may be fully or partially funded through other resources including EU programmes other than Horizon 2020 or Horizon Europe, such as the Cohesion policy funds, provided that double funding is avoided.

Applicants must specify in their proposal the total cost of their proposed programme and in particular the amounts that will be provided for the benefit of the researchers and for the organisation(s) that will implement the programme. This information will be needed to evaluate the adequateness of employment and working conditions of the researchers. The monthly gross remuneration, i.e. salaries, social security contributions, taxes and other costs or compulsory deductions under national legislation linked to in the remuneration, and the mobility costs for the benefit of the researchers must be:

- For researchers recruited under an employment contract: not lower than EUR 3300 (for doctoral candidates) and EUR 4700 (for postdoctoral researchers);
- For researchers recruited under a fixed-amount fellowship: not lower than EUR 1650 (for doctoral candidates) and EUR 2350 (for postdoctoral researchers).

4.2. Admissibility

The following exceptions to the General Annex A apply:

- The page limit of the application is 30 pages (excluding annexes).

¹⁶⁹ An exception to this limit may be granted for medical reasons.

- Where doctoral or postdoctoral programmes are implemented as financial support to third parties through implementing partners, applications do not need to include a plan for the exploitation and dissemination of results, including communication activities, because the scope of these activities will not be known at application stage.

4.3. Eligibility

Given the specific nature of MSCA COFUND, the following exceptions and additional eligibility criteria apply. This section also contains eligibility conditions, which apply during action implementation but cannot be verified at proposal stage.

4.3.1. Participating organisations

- Applications must be submitted by a single entity established in an EU Member State or Horizon Europe Associated Country.
- Affiliated entities are not allowed to participate as they cannot claim costs in MSCA COFUND.
- The conditions for financial support to third parties defined in General Annex B do not apply.
- International organisations with headquarters in an EU Member State or Horizon Europe Associated Country will be deemed to be established in this Member State or Associated Country.
- The beneficiary will be responsible for the availability of the necessary complementary funds to implement the proposal.
- In each COFUND action, a minimum of three researchers must be recruited. COFUND proposals foreseeing research training for fewer than three researchers will be deemed ineligible.
- Implementing partners must be established in one of the countries eligible for funding listed in the General Annexes.

4.3.2. Recruited researchers

- Recruited researchers can be of any nationality (see also specific condition for COFUND Postdoctoral Programmes below) and must comply with the following **mobility rule**¹⁷⁰: they must not have resided or carried out their main activity¹⁷¹ (work, studies, etc.) in the country of the recruiting beneficiary or implementing

¹⁷⁰ Existing programmes with international mobility applying for COFUND can deviate from this rule if duly justified in the proposal by the applicant. The existing mobility rule will be evaluated by the independent experts to judge if it is in the spirit of the MSCA mobility rule.

¹⁷¹ Country of the main activity: the country where the researcher is physically based when carrying out the main activity and the country of the institution for which the main activity is performed (e.g., employer)

partner for more than 12 months in the 36 months immediately before the deadline of the co-funded programme's call.

For International European Research Organisations' (IERO), 'international organisations' or entities created under Union law, the researchers must not have spent more than 12 months in the 36 months immediately before the deadline of the co-funded programme's call, in the same appointing organisation.

Compulsory national service, short stays such as holidays and time spent as part of a procedure for obtaining refugee status under the Geneva Convention¹⁷² are not taken into account.

- Supported researchers must be either doctoral candidates or postdoctoral researchers, depending on the action:
 - For COFUND Doctoral Programmes, researchers must be doctoral candidates, i.e. not already in possession¹⁷³ of a doctoral degree at the deadline of the co-funded programme's call.

Researchers must be enrolled in a doctoral programme leading to the award of a doctoral degree in at least one EU Member State or Horizon Europe Associated Country.
 - For COFUND Postdoctoral Programmes, researchers must be in possession of a doctoral degree¹⁷⁴ at the deadline of the co-funded programme's call. Researchers who have successfully defended their doctoral thesis but who have not yet formally been awarded the doctoral degree will also be considered as postdoctoral researchers and will be considered eligible to apply. The successful defence must be unconditional (no further requirements/corrections that need to be addressed) and take place before the call deadline. Supporting documentation may be requested.
- For COFUND Postdoctoral Programmes: researchers must be nationals or long-term residents of an EU Member State or Horizon Europe Associated Country, in case the main part of the research training activities is carried out in a country other than an EU Member State or Horizon Europe Associated Country.
- Limitations regarding the researchers' origin and destination should be avoided. Researchers who are already permanently employed by the organisation hosting them cannot be funded by COFUND.

¹⁷² 1951 Refugee Convention and the 1967 Protocol.

¹⁷³ Researchers who have successfully defended their doctoral thesis but who have not yet formally been awarded the doctoral degree will not be considered eligible.

¹⁷⁴ A medical doctor degree will be accepted only when it corresponds to a doctoral degree or if the researcher can demonstrate his/her appointment in a position that requires doctoral equivalency (e.g. professorship appointment). Medical doctor degrees corresponding to basic medical training as defined in Annex V of Directive 2005/36/EC will not be considered a doctoral degree.

4.3.3. Duration of the action

- The maximum duration of the action must be 60 months from the starting date set out in the grant agreement. It also includes the time that is needed to select and recruit the researchers.
- The minimum duration of each fellowship (on the basis of full-time employment) must be three months.
- For Postdoctoral Programmes where the main part of the research training activity does not take place in an EU Member State or a Horizon Europe Associated Country (i.e. outgoing phase), the researcher should carry out a mandatory return period of 12 months at the premises of the beneficiary or the recruiting implementing partner. A maximum of three months can be spent at the start of the action at the beneficiary (or any other organisation mentioned in the description of the action), allowing the researcher to spend time there before the outgoing phase. Secondments cannot take place during the mandatory twelve-month return period to the host organisation in an EU Member State or Horizon Europe Associated Country.
- The duration of the secondments should be limited to a maximum of one third of the actual months spent implementing the research training activities under the action or, if applicable, of the duration of the outgoing phase for Postdoctoral Programmes.

4.4. Award criteria

- Proposals will be evaluated by experts on the basis of the **award criteria** 'excellence', 'impact' and 'quality and efficiency of the implementation'.
- Evaluation scores will be awarded for each of these criteria, and not for the different aspects listed in the table below. Each criterion will be scored out of 5. Scores will be awarded with a resolution of one decimal place and will be subject to a weighting factor as indicated in the table below.
- Proposals scoring equal to or above 70% will be considered for funding — within the limits of the available call budget. Other proposals will be rejected.

Excellence	Impact	Quality and efficiency of the implementation
Quality and novelty of the selection / recruitment process for the researchers (transparency, composition and organisation of selection committees, evaluation criteria, equal opportunities, the gender	Strengthening human resources good practices at institutional, regional, national, or international level, in particular through aligning the practices of participating organisations with the principles set out by the EU for human resources	Quality and effectiveness of the work plan, management structures, assessment of risks and appropriateness of the effort assigned to work packages

Excellence	Impact	Quality and efficiency of the implementation
dimension and other diversity aspects) and quality and attractiveness of the appointment conditions, including competitiveness of the salary for the standards of the hosting countries.	development in research and innovation	
Quality and novelty of the research options offered by the programme in terms of science, interdisciplinarity, inter-sectorality and level of international mobility. Quality of open science practices	Credibility of the proposed measures to enhance the career perspectives and employability of researchers and contribution to their skills development	Quality and capacity of the host institution(s) and participating organisations (where appropriate), including hosting arrangements and extent to which they bring together the necessary expertise to successfully implement the research training programme
Quality, novelty and pertinence of the research training programme (including transferable skills, inter/multidisciplinary, inter-sectoral and gender as well as other diversity aspects)	Suitability and quality of the measures to maximise the expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities	
Quality, novelty and pertinence of the supervision, career guidance and career development arrangements		
50%	30%	20%
Weighting		

4.5. Procedure

- In COFUND, the evaluation will be organised in two different panels, Doctoral Programmes and Postdoctoral Programmes, but a single ranking list will be produced.

Ex-aequo Proposals

- When the total scores of two or more proposals are equal (ex-aequo cases), the priority order will be established as follows:

The proposals will be prioritised according to the scores they have been awarded for the criterion 'Excellence'. When these scores are equal, priority will be based on scores for the criterion 'Impact'. If a distinction still cannot be made, the panel may decide to further prioritise by considering other factors such as environmental considerations in line with the MSCA Green Charter, gender and other diversity aspects in the research activities, participation of the non-academic sector (including involvement of SMEs), geographical diversity ¹⁷⁵, synergies with Cohesion policy funds, support to Smart Specialisation Strategies, or relationship to the Horizon Europe objectives in general. These factors will be documented in the panel report.

Seal of Excellence

Seals of Excellence will be awarded to applications with a total score **equal to or higher than 85%**, but which cannot be funded due to lack of budget available to the call.

4.6. Legal and financial set-up of the Grant Agreements

The following exceptions and additional conditions apply:

- Eligible costs must take the form of unit contributions, as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme.
- When associated partners are involved, the beneficiary is encouraged to sign a partnership agreement with them to regulate the internal relationship between all participating organisations. The partnership agreement(s) must comply with the grant agreement.
- The beneficiary may provide financial support to third parties. The support to third parties can only be provided in the form of grants, based on the MSCA unit contributions.

¹⁷⁵ Defined as the number of EU Member States or Associated Countries represented in the proposal, not otherwise receiving funds from projects higher up the ranking list (and if equal in number, then by budget).

- Grants awarded under this topic may be linked to actions funded under the Cohesion policy funds.
- The beneficiary must ensure full access — on a royalty-free basis — for the recruited researchers to background and results needed for their activities under the action.
- The following deliverables will have to be submitted for grants awarded under this topic:
 - **mid-term meeting** organised between the participants and the granting authority;
 - **mobility declaration** submitted within 20 days of the start of the research training activities, for each researcher, and updated (if needed) via the Funding & Tenders Portal Continuous Reporting tool;
 - **career development plan:** a document describing how the individual Career Development Plans have been established (listing also the researchers for whom such plans have been put in place), submitted towards the end of the project;
 - **evaluation questionnaire** completed by each recruited researcher and submitted at the end of the research training activity; a follow-up questionnaire submitted two years later;
 - **data management plan** submitted at mid-term and an update towards the end of the project if needed;
 - **plan for the dissemination and exploitation of results, including communication activities** submitted at mid-term and an update towards the end of the project.

5. MSCA CHOOSE EUROPE

5.1. Applicable unit contributions

The EU contribution for MSCA Choose Europe will take the form of unit contributions, as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme¹⁷⁶.

The following budget categories apply:

MSCA Choose Europe			
	Choose Europe allowance	Long-term leave allowance (if	Special needs allowance (if

¹⁷⁶ The indicative budget includes budget provisions for the increase of the maximum EU contribution for grants funded under Horizon Europe MSCA Choose Europe calls in line with the provisions of the decision authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme.

		applicable)	applicable)
	EUR 6700 per person-month for the duration of the initial phase (24 or 36 months)	EUR 6700 x % covered by the beneficiary	requested unit ¹⁷⁷ x (1/number of months)

The **Choose Europe allowance** can be used during the first phase¹⁷⁸ to cover:

- costs of the researchers throughout the fellowship duration including the remuneration payable to the researchers recruited under an employment contract with full social security coverage and complying with the applicable social security legislation, as well as the mobility costs and, if applicable, the family costs, and/or
- costs related to the training, research expenses, activities related to networking of researchers and transfer of knowledge, costs of managing the action and indirect costs.

During the first phase, the monthly gross remuneration, i.e. salaries, social security contributions, taxes and other costs or compulsory deductions under national legislation linked to remuneration must be no lower than EUR 6700 (i.e. the Choose Europe allowance).

During the second phase, the monthly gross remuneration can differ from the initial phase but must remain attractive and competitive at national level. The beneficiary will be responsible for the availability of the necessary funds to cover the monthly gross remuneration during this phase. This phase should contribute to the longer-term career prospects and employability of the recruited researcher following the project period.

The monthly gross remuneration for both phases, as well as the costs or compulsory deductions under national legislation, such as employer and employee' social security contributions and direct taxes, must be clearly communicated in the vacancy notice.

The **long-term leave allowance** contributes to the personnel costs incurred by the employer in case of the researchers' leave, including maternity, paternity, parental, sick or special leave, longer than 30 consecutive days. The **special needs allowance** contributes to the additional costs for the acquisition of special needs items and services for researchers with disabilities, whose long-term physical, mental, intellectual or sensory impairments¹⁷⁹ are certified by a competent national authority, and of such nature that their participation in the action may not be possible without them (e.g. assistance by third persons, adaptation of work environment, additional travel/transportation costs). These special needs items or services must not have been funded from another source (e.g. social security or health insurance). Both long-term leave and special needs allowances can be requested when the need arises during the first

¹⁷⁷ The pre-defined categories are as follows: EUR 3 000, EUR 4 500, EUR 6 000, EUR 9 500, EUR 13 000, EUR 18 500, EUR 27 500, EUR 35 500, EUR 47 500 and EUR 60 000.

¹⁷⁸ See eligibility section 5.3.

¹⁷⁹ See Article 1 of the UN Convention on the Rights of Persons with Disabilities.

phase of the project. During the second phase, the beneficiary should continue to follow the applicable national legislation regarding remuneration of researchers on leave and provisions for researchers with special needs.

The beneficiary must employ and host the selected researchers under an employment contract or 'equivalent direct contract' with full social security coverage (including sickness, parental, unemployment and invalidity benefits, pension rights, benefits in respect of accidents at work and occupational diseases). An exemption from this rule can be accepted only in cases where national legislation or the equivalent internal regulations of International European Research Organisations (IERO), entities created under Union law, or an international organisation, prohibit this possibility and subject to the prior agreement of the granting authority.

In principle, researchers should be employed full-time. The above rates apply to researchers devoting themselves to their project on a full-time basis. Researchers may, in agreement with the beneficiary and with prior approval by the granting authority, implement their project on a part-time basis.

In cases of part-time work, researchers must work at least 50% of the full working time in their recruiting organisation for the action co-funded by the MSCA, whether they are working part-time for family or other reasons¹⁸⁰. The beneficiary should report costs as pro rata of the applicable full-time unit contributions.

The EU contribution is limited to EUR 3.5 million per beneficiary for this call. If an applicant submits two or more successful applications totalling more than EUR 3.5 million within this call, the applicant will be required to decide which of these proposals to implement.

The table above specifies the unit contributions for the co-funding of regional, national and international programmes. The EU contribution can be used to support any cost items of the programme during the initial phase (remuneration costs, mobility costs, family costs, research, training and networking costs, management and indirect costs). Complementary funds to implement the project can be fully or partially funded through other sources including EU programmes other than Horizon Europe, such as the Cohesion policy funds, provided that double funding is avoided.

Applicants must specify in their proposal the total cost of their proposed programme and in particular the amounts, including the Choose Europe allowance, that will be provided for the benefit of the researchers in each phase. This information will be needed to evaluate the adequateness and attractiveness of employment and working conditions of the researchers.

5.2. Admissibility

The following exceptions to the General Annex A apply:

- The page limit of the application is 30 pages (excluding annexes).

¹⁸⁰

An exception to this limit may be granted for medical reasons.

- Applications do not need to include a plan for the exploitation and dissemination of results, including communication activities.

5.3. Eligibility

Given the specific nature of MSCA Choose Europe, the following exceptions and additional eligibility criteria apply. This section also contains eligibility conditions, which apply during action implementation but cannot be verified at proposal stage.

Each Choose Europe programme must have two phases: a first phase of 24 months for a 48-month fellowship or 36 months for a 60-month fellowship, and a second phase of 24 months.

5.3.1. *Participating organisations*

- Applications must be submitted by a single entity established in an EU Member State or Horizon Europe Associated Country.
- Affiliated entities are not allowed to participate as they cannot claim costs in MSCA Choose Europe.
- International organisations with headquarters in an EU Member State or Horizon Europe Associated Country will be deemed to be established in this Member State or Associated Country.
- The beneficiary will be responsible for the availability of the necessary complementary funds to implement the proposal and ensure the full coverage of the second phase as described in the proposal.
- In each Choose Europe programme, a minimum of three researchers must be recruited. Proposals foreseeing recruitment for fewer than three researchers will be deemed ineligible.

5.3.2. *Recruited researchers*

- Recruited researchers can be of any nationality and must comply with the following **mobility rule**: they must not have resided or carried out their main activity (work, studies, etc.) in the country of the recruiting beneficiary for more than 12 months in the 36 months immediately before the deadline of the vacancy notice.
- For International European Research Organisations' (IERO), 'international organisations' or entities created under Union law, the researchers must not have spent more than 12 months in the 36 months immediately before the deadline of the vacancy notice, in the same appointing organisation.
- Compulsory national service, short stays such as holidays and time spent as part of a procedure for obtaining refugee status under the Geneva Convention are not taken into account.

- Researchers who are already permanently employed by the organisation hosting them cannot be funded by MSCA Choose Europe.
- Researchers who are temporarily employed by the organisation hosting them and who adhere to the mobility requirement can be funded under MSCA Choose Europe.
- Researchers must be nationals or long-term residents of an EU Member State or Horizon Europe Associated Country in case the main part of the activities is carried out in a country other than an EU Member State or Horizon Europe Associated Country.
- Limitations regarding the researchers' origin and destination should be avoided.
- Supported researchers must be in possession of a doctoral degree at the vacancy notice deadline.¹⁸¹

5.3.3. *Duration of the action*

- The maximum duration of the action must be 60 months from the starting date set out in the grant agreement for a 48-month fellowship and 72 months for a 60-month fellowship. It also includes the time that is needed to select and recruit the researchers.
- Researchers must be recruited within the first 12 months of the action duration.
- The minimum duration of each fellowship (on the basis of full-time employment) must be 48 months¹⁸² and the maximum duration is 60 months¹⁸³.

5.4. Award criteria

- Proposals will be evaluated by experts on the basis of the **award criteria** 'excellence', 'impact' and 'quality and efficiency of the implementation'.
- Evaluation scores will be awarded for each of these criteria, and not for the different aspects listed in the table below. Each criterion will be scored out of 5. Scores will be awarded with a resolution of one decimal place and will be subject to a weighting factor as indicated in the table below.
- Proposals scoring equal to or above 70% will be considered for funding — within the limits of the available call budget. Other proposals will be rejected.

Excellence	Impact	Quality and efficiency of the implementation
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¹⁸¹ A medical doctor degree will be accepted only when it corresponds to a doctoral degree or if the researcher can demonstrate his/her appointment in a position that requires doctoral equivalency (e.g. professorship appointment). Medical doctor degrees corresponding to basic medical training as defined in Annex V of Directive 2005/36/EC will not be considered a doctoral degree.

¹⁸² 24 months of the initial stage and 24 months of the second phase

¹⁸³ 36 months of the initial stage and 24 months of the second phase

Quality of the selection / recruitment process for the researchers (transparency, composition and organisation of selection committees, evaluation criteria, equal opportunities, the gender dimension and other diversity aspects)	Contribution to addressing local human resource needs, to advancing regional/national specialisation strategies, and to strengthening European research, innovation and teaching capacity	Quality, credibility and effectiveness of the recruitment plan, assessment of risks and appropriateness of the effort assigned towards offering concrete career prospects for recruited researchers
Quality and attractiveness of the appointment conditions, including inclusive working conditions, quality and attractiveness of the research environment and the resources, training and career development opportunities provided, and remuneration offered in the second phase of the fellowship	Strengthening human resources good practices at institutional, regional, national, or international level, in particular through aligning the practices of participating organisations with the principles set out by the EU for human resources development in research and innovation	Quality and capacity of the recruiting institutions, including hosting arrangements and institutional procedures' alignment with the European Charter for Researchers (institutions with the HRS4R label are exempted from providing further justification for this criterion) and the Agreement on Reforming Research Assessment
Quality and attractiveness of the concrete long-term career prospects that extend beyond the duration of the fellowship		
Quality and ambition of the research, innovation and/or academic objectives of the recruitment programme		
50%	30%	20%
Weighting		

5.5. Procedure

- For MSCA Choose Europe, the evaluation will be organised in a single panel.

- The threshold for criterion 1 (Excellence) will be 3.

Ex-aequo Proposals

- When the total scores of two or more proposals are equal (ex-aequo cases), the priority order will be established as follows:

The proposals will be prioritised first according to the scores they have been awarded for the criterion ‘Excellence’ and if these scores are equal, priority will be based on scores for the criterion ‘Impact’. When these scores are equal, priority will be based specifically on the career prospects offered to the recruited researchers. If a distinction still cannot be made, the panel may decide to further prioritise by considering geographical diversity. This will be documented in the panel report.

Seal of Excellence

Seals of Excellence will be awarded to applications with a total score **equal to or higher than 85%**, but which cannot be funded due to lack of budget available to the call.

5.6. Legal and financial set-up of the Grant Agreements

The following exceptions and additional conditions apply:

- Eligible costs must take the form of unit contributions, as stipulated in Decision of 11 March 2021 authorising the use of lump sum contributions and unit contributions for Marie Skłodowska-Curie actions under the Horizon Europe Programme.
- When associated partners are involved, the beneficiary is encouraged to sign a partnership agreement with them to regulate the internal relationship between all participating organisations. The partnership agreement(s) must comply with the grant agreement.
- Grants awarded under this topic may be linked to actions funded under the Cohesion policy funds.
- The beneficiary must ensure full access — on a royalty-free basis — for the recruited researchers to background and results needed for their activities under the action.
- The following deliverables will have to be submitted for grants awarded under this topic:
 - **mid-term meeting** organised between the participants and the granting authority;
 - **career development plan:** a document describing how the individual Career Development Plans have been established (listing also the researchers for whom such plans have been put in place), submitted towards the end of the project;

- **evaluation questionnaire** completed by each recruited researcher and submitted at the end of the research training activity; a follow-up questionnaire submitted two years later;
- **data management plan** submitted at mid-term and an update towards the end of the project if needed.

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Table 1: Country correction coefficients (CCC) for Doctoral Networks and Postdoctoral Fellowships living allowances¹⁸⁴

For countries where the correction coefficient is not indicated, the Commission will decide on a case-by-case basis.

Country Code ¹⁸⁵	CCC
EU Member States	
AT	109,7%
BE	100%

¹⁸⁴ These conditions only apply to the 2024 and 2025 calls of this Work Programme. For the conditions applying to the 2023 calls, please see the Work Programme version adopted on 6 December 2022 (European Commission Decision C(2022)7550).

¹⁸⁵ [ISO 3166 alpha-2](#), except for Greece and the United Kingdom (EL and UK used respectively instead of GR and GB).

BG	64,7%
CY	81,9%
CZ	94,1%
DE	101,2%
DK	132,8%
EE	92,7%
EL	86,8%
ES	95,6%
FI	118%
FR	118,1%
HR	80,1%
HU	76,7%
IE	136,4%
IT	95,3%
LT	86,6%
LU	100%
LV	83,8%
MT	92,4%
NL	111,6%
PL	74,1%
PT	93,7%
RO	70,7%
SE	125%
SI	87,7%
SK	80,9%

Third Countries	
AE	95,5%
AG	67,2%
AI	136,9%
AL	56,1%
AM	107,1%
AN	109,6%
AO	128,9%
AR	82,7%
AU	108,3%
AZ	99,1%
BA	59,9%
BB	115,6%
BD	83,7%
BF	92%
BI	85,6%
BJ	94,5%
BO	78,3%
BR	90,1%
BQ	109,6%
BW	69,1%
BY	71,8%
BZ	79,9%
CA	114,4%
CD	139,3%
CF	106,6%

CG	120,7%
CH	163,8%
CI	88,6%
CL	67,6%
CM	91,8%
CN	85,2%
CO	69,4%
CR	85,4%
CU	121,4%
CV	69%
DJ	107,9%
DO	75,2%
DZ	64,8%
EC	82,7%
EG	72,3%
ER	106,3%
ET	80,1%
FJ	72,6%
FO	134,2%
GA	107,7%
GE	77,7%
GH	83,7%
GL	132%
GM	92,9%
GN	115,5%
GT	96,9%

**Horizon Europe - Work Programme 2023-2024 Marie Skłodowska
-Curie Actions**

GU	102,3%
GW	75,6%
GY	89%
HK	117%
HN	85,1%
HT	107,8%
ID	71,6%
IL	121,5%
IM	136,9%
IN	91,3%
IR	135,8%
IS	138,9%
JM	103,1%
JO	92,8%
JP	161%
KE	90,8%
KG	79,7%
KH	85,5%
KM	75,7%
KR	127,9%
KZ	79,8%
LA	64,3%
LB	116,2%
LI	151%
LK	72,7%
LR	134,4%
LS	61,7%
MA	80,8%

MD	80,8%
ME	57,5%
MG	84,1%
MK	49,5%
ML	90,6%
MM	66,6%
MR	85%
MU	74,7%
MV	91,3%
MW	72,3%
MX	71,7%
MY	78,6%
MZ	102,2%
NA	74,2%
NC	98,5%
NE	82,1%
NG	77,1%
NI	86,5%
NO	135,6%
NP	70,1%
NZ	100,5%
PA	99,3%
PE	87,2%
PF	116,4%
PG	100%
PH	88,9%
PK	69,2%
PS	121,5%

PY	63,2%
QA	95,5%
RS	72,5%
RU	110,5%
RW	84,2%
SA	94,2%
SB	112,7%
SD	83,3%
SG	121,4%
SL	92,6%
SN	86%
SR	69,1%
ST	107,7%
SV	79,8%
SZ	65,1%
TD	98,6%
TG	97,2%
TH	73%
TJ	71,1%
TL	81,8%
TM	138,5%
TN	74,7%
TR	64,5%
TT	92,7%
TW	81,9%
TZ	92,3%
UA	82,4%
UG	76,5%

UK	141,7%
US	169,4%
UY	91,1%
UZ	70,1%
VA	97,4%
VE	139,2%
VN	72,2%
VU	104,8%
WS	82,2%
XK	53,1%
YE	104,4%
ZA	63%
ZM	81,8%
ZW	98,3%

EN

Horizon Europe

Work Programme 2023-2025

13. General Annexes

IMPORTANT NOTICE:

This amended draft has not been adopted or endorsed by the European Commission. Any views expressed are the views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

This amended draft is made public before the adoption of the amended work programme to provide potential participants with the currently expected main lines of this amended work programme. Only the adopted amended work programme will have legal value.

The adoption of the amended work programme will be announced on the Horizon Europe website and on the Funding and Tenders Portal.

Information and topic descriptions indicated in this amended draft may not appear in the final amended work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

The Commission expressly disclaims liability for any future changes of the content of this document.

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INTRODUCTION

These General Annexes set out the general conditions applicable to calls and topics for grants and other forms of funding under the Horizon Europe main work programme. They also describe the evaluation and award procedures and other criteria for Horizon Europe funding. In particular, the General Annexes outline the:

- admissibility and eligibility criteria for participation and for receiving funding, the criteria for having the financial and operational capacity and for exclusion (Annexes A-C);
- award criteria, mandatory documents and evaluation procedure (Annexes D-F);
- legal and financial set-up of the grant agreements (Annex G);
- specific conditions applying to actions which include pre-commercial procurement or procurement of innovative solutions (Annex H).

If a topic deviates from the general conditions or includes additional conditions, this is explicitly stated under the specific conditions for the topic.

Applicants are invited to read the call documentation on the topic page of the Funding & Tenders Portal ('Portal') carefully, and particularly these General Annexes, the [Horizon Europe Programme Guide](#)¹, the [EU Funding & Tenders Portal Online Manual](#)² and the [EU Grants AGA — Annotated Grant Agreement](#)³. These documents provide clarifications and answers to questions on preparing the application.

 Please note that calls launched by the European Research Council (ERC), the European Innovation Council (EIC), the European Institute of Innovation and Technology (EIT), the Institutionalised European Partnerships based on Articles 185 and 187 of the Treaty on the Functioning of the European Union (TFEU), calls under the Euratom Research and Training Programme and the activities of the European Commission Joint Research Centre (JRC) are subject to separate work programmes and thus not covered by these General Annexes.

¹ The Horizon Europe Programme Guide outlines the detailed guidance on the structure, budget and political priorities of Horizon Europe.

² The Online Manual outlines the procedures to register and submit applications online via the EU Funding & Tenders Portal and recommendations on preparing the application.

³ The AGA — Annotated Grant Agreement contains detailed annotations on all the provisions in the grant agreement that must be signed to obtain the grant.

GENERAL CONDITIONS

A — Admissibility

Admissibility

Applications must be submitted before the **call deadline**.

Applications must be submitted **electronically** via the Funding & Tenders Portal electronic submission system (accessible via the topic page in the [Search Funding & Tenders](#) section). Paper submissions are NOT possible.

Applications must be submitted using the forms provided *inside* the electronic submission system (not the templates available on the topic page, which are only for information). The structure and presentation must correspond to the instructions given in the forms.

Applications must be **complete** and contain all parts and mandatory Annexes and supporting documents (*see Annex E below*).

Applications must be **readable, accessible and printable**.

Applications must include **a plan for the exploitation and dissemination of results including communication activities**, unless provided otherwise in the specific call/topic conditions. The plan is not required for applications at the first stage of two-stage procedures. If the expected exploitation of the results entails developing, creating, manufacturing and marketing a product or process, or in creating and providing a service, the plan must include a strategy for such exploitation. If the plan provides for exploitation of the results primarily in non-associated third countries, the applicants must explain how that exploitation is to be considered in the EU's interest.

Applicants submitting a proposal under the blind evaluation pilot (*see Annex F below*) must not disclose their organisation names, acronyms, logos nor names of personnel in Part B of their first-stage application (*see Annex E below*).

Page limits

In addition to the above admissibility conditions, page limits will apply to parts of applications. The page limits, and sections subject to limits, will be clearly shown in the application templates in the Funding & Tenders Portal electronic submission system.

Unless provided otherwise in the specific call/topic conditions, **the limit for a full application is 45 pages** (except for 'Coordination and support' actions, where the limit is 30 pages, and for 'Programme co-fund' actions, where the limit is 70 pages). For topics using lump sum funding, the limit for 'Research and Innovation' actions and 'Innovation' actions is 50 pages and the limit for 'Coordination and support' action is 33 pages.

The limit for a first-stage application is 10 pages.

If an application exceeds the limits, there will be an automatic warning and invitation to re-submit a version that conforms to these limits. After the call deadline, excess pages will be automatically made invisible, and will not be taken into consideration by the evaluators.

B — Eligibility

Entities eligible to participate

Any legal entity, regardless of its place of establishment, including legal entities from non-associated third countries or international organisations (including international European research organisations⁴) is eligible to participate (whether it is eligible for funding or not), provided that the conditions laid down in the Horizon Europe Regulation⁵ have been met, along with any other conditions laid down in the specific call/topic.

A ‘legal entity’ means any natural or legal person created and recognised as such under national law, EU law or international law, which has legal personality and which may, acting in its own name, exercise rights and be subject to obligations, or an entity without legal personality⁶.

Beneficiaries and affiliated entities must register in the [Participant Register](#) before submitting their application, in order to get a participant identification code (PIC) and be validated by the Central Validation Service before signing the grant agreement. For the validation, they will be asked to upload the necessary documents showing their legal status and origin during the grant preparation stage. A validated PIC is not a prerequisite for submitting an application.

 For more information, see [Rules for Legal Entity Validation, LEAR Appointment and Financial Capacity Assessment](#).

Specific cases:

Affiliated entities — Affiliated entities (i.e. entities with a legal or capital link to a beneficiary⁷ which participate in the action with similar rights and obligations to the beneficiaries, but which do not sign the grant agreement and therefore do not become beneficiaries themselves) are allowed, if they are eligible for participation and funding.

Associated partners — Associated partners (i.e. entities which participate in the action without signing the grant agreement, and without the right to charge costs or claim contributions) are allowed, subject to any specific call/topic conditions.

Entities without legal personality — Entities which do not have legal personality under their national law may exceptionally participate, provided that their representatives have the

⁴ ‘International European research organisation’ means an international organisation, the majority of whose members are Member States or Associated Countries, and whose principal objective is to promote scientific and technological cooperation in Europe.

⁵ Regulation (EU) 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe (OJ L 170, 12.5.2021, p. 1).

⁶ See Article 197(2)(c) EU Financial Regulation [2018/1046](#).

⁷ See Article 187 EU Financial Regulation [2018/1046](#).

capacity to undertake legal obligations on their behalf, and offer guarantees to protect the EU's financial interests equivalent to those offered by legal persons⁸.

EU bodies — Legal entities created under EU law including decentralised agencies may be part of the consortium, unless provided for otherwise in their basic act.

Joint Research Centre ('JRC')— Where provided for in the specific call/topic conditions, applicants may include in their proposals the possible contribution of the JRC but the JRC will not participate in the preparation and submission of the proposal. Applicants will indicate the contribution that the JRC could bring to the project based on the scope of the topic text. After the evaluation process, the JRC and the consortium selected for funding may come to an agreement on the specific terms of the participation of the JRC. If an agreement is found, the JRC may accede to the grant agreement as beneficiary requesting zero funding or participate as an associated partner, and would accede to the consortium as a member.

Associations and interest groupings — Entities composed of members (e.g. European research infrastructure consortia (ERICs)) may participate as 'sole beneficiaries' or 'beneficiaries without legal personality'⁹. However, if the action is in practice implemented by the individual members, those members should also participate either as beneficiaries or as affiliated entities (otherwise their costs will NOT be eligible).

Restrictions on participation in Innovation Actions — In accordance with the 2019 "EU-China - A Strategic outlook" communication, the 2021 "Global Approach to Research and Innovation" communication, and the joint conclusions of the 4th EU-China Innovation Cooperation Dialogue of 2019, an exercise to develop a Joint Roadmap for the future of EU-China cooperation in science, technology, and innovation (Roadmap) has been established between the EU and China. It has the objective to develop a level playing field for engagement between the EU and China in the areas of science, technology, and innovation (STI) that is respectful of fundamental research and innovation values and principles. This endeavor is to be achieved through an agreement on the framework conditions contained in the Roadmap and their monitoring and evaluation. As progress so far has mainly taken place on the framework conditions linked to research rather than on those related to innovation, and taking into account the nature and objectives in particular of Innovation Actions, cooperation with entities established in China needs to be calibrated accordingly.

Legal entities established in China are therefore not eligible to participate in Horizon Europe Innovation Actions in any capacity. This includes participation as beneficiaries, affiliated entities, associated partners, third parties giving in-kind contributions, subcontractors or recipients of financial support to third parties (if any). Exceptions may be granted on a case-by-case basis for justified reasons. The above eligibility criteria may be reviewed in the future in accordance with policy developments. This exclusion is justified under Article 22(6) of the Horizon Europe Regulation given the substantive concerns regarding the use of intellectual property generated under this publicly funded programme, and the ongoing discussions

⁸ See Article 197(2)(c) EU Financial Regulation [2018/1046](#).

⁹ See Articles 187(2) and 197(2)(c) EU Financial Regulation [2018/1046](#).

between China and the EU on the Joint Roadmap for the future of EU-China cooperation in science, technology, and innovation

Restrictions for the protection of European communication networks — The protection of European communication networks has been identified as an important security interest of the Union and its Member States.¹⁰ In line with the Commission Recommendation on the cybersecurity of 5G networks of 2019¹¹ and the subsequent report on EU coordinated risk assessment of the cybersecurity of 5G networks of 2019,¹² the EU Toolbox on 5G cybersecurity,¹³ the second report on Member States' progress in implementing the EU toolbox on 5G cybersecurity of 2023,¹⁴ and the related Communication on the implementation of the 5G cybersecurity toolbox of 2023,¹⁵ the Commission together with the Member States has worked to jointly identify and assess cyberthreats and security risks for 5G networks.¹⁶ The toolbox also recommends adding country-specific information (e.g. threat assessment from national security services, etc.). This work is an essential component of the Security Union Strategy and supports the protection of electronic communications networks and other critical infrastructures.

Entities assessed as “high-risk suppliers”, are currently set out in the second report on Member States' progress in implementing the EU toolbox on 5G cybersecurity of 2023¹⁷ and the related Communication on the implementation of the 5G cybersecurity toolbox of 2023¹⁸.

The toolbox also underlines that further developing European capacities in the area of 5G and post-5G technologies by leveraging EU Research & Innovation Funding programmes is a strategic risk mitigating measure. This entails the need to avoid the participation of high-risk supplier entities in the development of other technologies linked to the evolution of European communication networks to prevent technology transfer and the persistence of dependencies in materials, semiconductor components (including processors), computing resources, software tools and virtualisation technologies, as well as related cybersecurity.

In order to protect the specific policy requirements of the Union and/or its Member States, it is therefore appropriate that the following additional eligibility criteria apply to actions identified as “subject to restrictions for the protection of European communication networks” and to proposals within the MSCA part¹⁹ that concern the evolution of European communication networks (5G, post-5G and other technologies linked to the evolution of European communication networks):

¹⁰ European Council conclusions of 1 and 2 October 2020 (EUCO 13/20), point 11; Council Conclusions on the significance of 5G to the European Economy and the need to mitigate security risks linked to 5G, 14517/19.

¹¹ Commission Recommendation (EU) 2019/534 of 26 March 2019 Cybersecurity of 5G networks, L 88/42.

¹² NIS Cooperation Group, Report on EU coordinated risk assessment of the cybersecurity of 5G networks, 9 October 2019.

¹³ NIS Cooperation Group, EU Toolbox on 5G Cybersecurity, 29 January 2020.

¹⁴ NIS Cooperation Group, Second report on Member States' progress in implementing the EU Toolbox on 5G Cybersecurity, June 2023.

¹⁵ Communication from the Commission: Implementation of the 5g cybersecurity Toolbox, Brussels, 15.6.2023 C(2023) 4049 final.

¹⁶ Within the NIS framework NIS 1 + 2 [Directive - 2022/2555 - EN - EUR-Lex (europa.eu)]

¹⁷ NIS Cooperation Group, Second report on Member States' progress in implementing the EU Toolbox on 5G Cybersecurity, June 2023.

¹⁸ Communication from the Commission: Implementation of the 5G cybersecurity Toolbox, Brussels, 15.6.2023 C(2023) 4049 final.

¹⁹ Doctorial Networks, Postdoctoral Fellowships, Staff Exchanges, Cofund.

Entities that are assessed as high-risk suppliers of mobile network communication equipment (and any entities they own or control) are not eligible to participate as beneficiaries, affiliated entities and associated partners.

The assessment is based on the following criteria:

- likelihood of interference from a non-associated third country, for example due to:
 - the characteristics of the entity's ownership or governance (e.g. state-owned or controlled, government/party involvement);
 - the characteristics of the entity's business and other conduct (e.g. a strong link to a third country government);
 - the characteristics of the respective third country (e.g. legislation or government practices likely to affect the implementation of the action, including an offensive cyber/intelligence policy, pressure regarding place of manufacturing or access to information).
- (cyber-)security practices, including throughout the entire supply chain;
- risks identified in relevant assessments of Member States and third countries as well as other EU institutions, bodies and agencies, if relevant.

Exceptions may be requested from the granting authority and will be assessed case-by-case, taking into account the criteria provided for in the 5G cybersecurity toolbox, the security risks and availability of alternatives in the context of the action.

Restrictions on participation or control — For actions related to EU strategic assets, interests, autonomy or security, the specific topic conditions may limit participation to legal entities established only in EU Member States or in EU Member States and specific associated or non-associated third countries. In this case, the eligible countries will be identified in the specific call/topic conditions. In addition, for duly justified and exceptional reasons, to guarantee protection of the strategic interests of the EU and its Member States, the specific call/topic conditions may also exclude the participation of legal entities directly or indirectly controlled by non-eligible third countries or by legal entities of non-eligible third countries (or make their participation subject to specific conditions), in line with Article 22(5) of the Horizon Europe Regulation.

EU restrictive measures — Entities subject to [EU restrictive measures](#) under Article 29 of the Treaty on the European Union (TEU) and Article 215 of the Treaty on the Functioning of the EU (TFEU)²⁰ as well as Article 75 TFEU²¹, are not eligible to participate in any capacity, including as beneficiaries, affiliated entities, associated partners, third parties giving in-kind contributions, subcontractors or recipients of financial support to third parties (if any).

²⁰ Please note that the EU Official Journal contains the official list and, in case of conflict, its content prevails over that of the [EU Sanctions Map](#).

²¹ Please note that the EU Official Journal contains the official list and, in case of conflict, its content prevails over that of the [EU Sanctions Map](#).

Special rules also apply to entities covered by Commission Guidelines No 2013/C 205/05²².

Legal entities established in Russia, Belarus, or in non-government controlled territories of Ukraine — Given the illegal invasion of Ukraine by Russia and the involvement of Belarus, there is currently no appropriate context allowing the implementation of the actions foreseen in this programme with legal entities established in Russia, Belarus, or in non-government controlled territories of Ukraine. Therefore, even where such entities are not subject to EU restrictive measures, such legal entities are not eligible to participate in any capacity. This includes participation as beneficiaries, affiliated entities, associated partners, third parties giving in-kind contributions, subcontractors or recipients of financial support to third parties (if any). Exceptions may be granted on a case-by-case basis for justified reasons.

Measures for the protection of the Union budget against breaches of the principles of the rule of law in Hungary — Following the [Council Implementing Decision \(EU\) 2022/2506](#), as of 16 December 2022, no legal commitments can be entered into with Hungarian public interest trusts established under the Hungarian Act IX of 2021 or any entity they maintain. Affected entities may continue to apply to calls for proposals. However, as long as the Council measures are not lifted, such entities are not eligible to participate in any funded role (beneficiaries, affiliated entities, subcontractors, recipients of financial support to third parties, etc). In case of multi-beneficiary grant calls, applicants will be invited to remove or replace that entity and/or to change its status into associated partner. Tasks and budget may be redistributed accordingly.

Entities eligible for funding

To become a beneficiary, legal entities must be eligible for funding.

To be eligible for funding, applicants must be established in one of the following countries:

- the Member States of the European Union, including their outermost regions:

Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.
- the Overseas Countries and Territories (OCTs) linked to the Member States:

Aruba (NL), Bonaire (NL), Curaçao (NL), French Polynesia (FR), French Southern and Antarctic Territories (FR), Greenland (DK), New Caledonia (FR), Saba (NL), Saint Barthélemy (FR), Sint Eustatius (NL), Sint Maarten (NL), St. Pierre and Miquelon (FR), Wallis and Futuna Islands (FR).
- countries associated to Horizon Europe²³;

²² Commission guidelines No [2013/C 205/05](#) on the eligibility of Israeli entities and their activities in the territories occupied by Israel since June 1967 for grants, prizes and financial instruments funded by the EU from 2014 onwards (OJEU C 205 of 19.07.2013, pp. 9-11).

Albania, Armenia, Bosnia and Herzegovina, Faroe Islands, Georgia, Iceland, Israel, Kosovo²⁴, Moldova, Montenegro, New Zealand, North Macedonia, Norway, Serbia, Tunisia, Türkiye, Ukraine, United Kingdom²⁵. Considering the Union's interest to retain, in principle, relations with the countries associated to Horizon 2020, most third countries associated to Horizon 2020 are expected to be associated to Horizon Europe with an intention to secure uninterrupted continuity between Horizon 2020 and Horizon Europe. In addition, other third countries can also become associated to Horizon Europe during the programme. For the purposes of the eligibility conditions, applicants established in Horizon 2020 Associated Countries or in other third countries negotiating association to Horizon Europe will be treated as entities established in an Associated Country, if the Horizon Europe association agreement with the third country concerned applies at the time of signature of the grant agreement.

- the following low- and middle-income countries:²⁶.

Afghanistan, Algeria, Angola, Argentina, Azerbaijan, Bangladesh, Belarus, Belize, Benin, Bhutan, Bolivia, Botswana, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Central African Republic, Chad, Colombia, Comoros, Congo (Democratic Republic), Congo (Republic), Costa Rica, Côte d'Ivoire, Cuba, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt (Arab Republic), El Salvador, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Fiji, Gabon, Gambia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Indonesia, Iran (Islamic Republic), Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Korea (Democratic People's Republic), Kyrgyz Republic, Lao (People's Democratic Republic), Lebanon, Lesotho, Liberia, Libya, Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritania, Mauritius, Micronesia (Federated States), Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Niger, Nigeria, Niue, Pakistan, Palau, Palestine²⁷, Papua New Guinea, Paraguay, Peru, Philippines, Rwanda, Samoa, São Tomé and Príncipe, Senegal, Sierra Leone, Solomon Islands, Somalia, South Africa, South Sudan, Sri Lanka, St. Lucia, St. Vincent and the Grenadines, Sudan, Suriname, Syrian Arab Republic,

²³ The list is correct at the time of adoption of this Work Programme. Please see the [Horizon Europe List of Participating Countries](#) on the Portal for up-to-date information on the current list and on the position for Associated Countries.

²⁴ This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

²⁵ The United Kingdom is associated to the entire Horizon Europe Programme, with the only exception of the EIC fund (which is part of the EIC Accelerator of Horizon Europe that provides investment through equity or other repayable form), for award procedures implementing Union budget for the year 2024 and onwards.

²⁶ The list is correct at the time of adoption of this Work Programme. See the [Horizon Europe List of Participating Countries](#) on the Portal for a up-to-date list of these countries.

²⁷ This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.

Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tonga, Turkmenistan, Tuvalu, Uganda, Uzbekistan, Vanuatu, Venezuela (Bolivarian Republic), Vietnam, Yemen Republic, Zambia, Zimbabwe.

Legal entities which are established in countries not listed above will be eligible for funding if provided for in the specific call/topic conditions, or if their participation is considered essential for implementing the action by the granting authority.

Specific cases:

Affiliated entities — Affiliated entities are eligible for funding if they are established in one of the countries listed above, or in a country identified in the specific call/topic conditions.

Associated partners — Entities not eligible for funding (and therefore not able to participate as beneficiaries) may participate as associated partners, unless specified otherwise in the specific call/topic conditions.

Coordination and Support Actions – To be eligible to participate as beneficiaries (or affiliated entities) in ‘Coordination and support’ actions, legal entities must be established in a Member State or Associated Country, unless the specific call/topic conditions provide otherwise (in which case the general rules for eligibility for funding apply). Legal entities established in a non-associated third country may, however, participate in ‘Coordination and support’ actions as associated partners, unless this is explicitly excluded by the specific call/topic conditions.

EU bodies — Legal entities created under EU law may also be eligible to receive funding, unless their basic act states otherwise.

International organisations — International European research organisations are eligible to receive funding. International organisations with headquarters in a Member State or Associated Country are eligible to receive funding for ‘Training and mobility’ actions or when provided for in the specific call/topic conditions. Other international organisations are not eligible to receive funding, unless provided for in the specific call/topic conditions, or if their participation is considered essential for implementing the action by the granting authority.

Consortium composition

Unless otherwise provided for in the specific call/topic conditions, only legal entities forming a consortium are eligible to participate in actions provided that the consortium includes, as beneficiaries, three legal entities independent from each other and each established in a different country as follows:

- at least one independent legal entity established in a Member State; and
- at least two other independent legal entities, each established in different Member States or Associated Countries.

As affiliated entities do not sign the grant agreement, they do not count towards the minimum eligibility criteria for consortium composition (if any).

The Joint Research Centre, international European research organisations and legal entities created under EU law are deemed to be established in a Member State other than those in which the other legal entities participating in the action are established.

Applications for ‘Training and mobility’ actions and for ‘Programme co-fund’ actions may be submitted by one or more legal entities, provided that one of those legal entities is established in a Member State or an Associated Country.

Applications for ‘Coordination and support’ actions may be submitted by one or more legal entities, which may be established in a Member State, Associated Country or, in exceptional cases and if provided for in the specific call/topic conditions, in another third country.

Applications for ‘Pre-commercial procurement’ actions and ‘Public procurement of innovative solutions’ actions must also fulfil the eligibility criteria of three independent legal entities as beneficiaries as explained above, out of which a minimum of two beneficiaries must be independent legal entities that are public procurers²⁸, each established in a different Member State or Associated Country and with at least one of them established in a Member State.

Eligible activities

Eligible activities are the ones described in the call conditions. Applications will only be considered eligible if their content corresponds, wholly or in part, to the topic description for which it is submitted.

Projects must focus exclusively on civil applications and must not:

- aim at human cloning for reproductive purposes;
- intend to modify the genetic heritage of human beings which could make such changes heritable (except for research relating to cancer treatment of the gonads, which may be financed);
- intend to create human embryos solely for the purpose of research, or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer.

Projects must, moreover, comply with EU policy interests and priorities (environment, social, security, industrial policy, etc.).

The following activities are generally eligible for grants under Horizon Europe:

Research and innovation actions (RIA) — Activities that aim primarily to establish new knowledge or to explore the feasibility of a new or improved technology, product, process,

²⁸ ‘Public procurers’ are organisations that are contracting authorities or contracting entities as defined in EU public procurement directives 2014/24/EU, 2014/25/EU, and 2009/81/E.

service or solution. This may include basic and applied research, technology development and integration, testing, demonstration and validation of a small-scale prototype in a laboratory or simulated environment.

Innovation actions (IA) — Activities that aim directly to produce plans and arrangements or designs for new, altered or improved products, processes or services. These activities may include prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.

Coordination and support actions (CSA) — Activities that contribute to the objectives of Horizon Europe. This excludes research and innovation (R&I) activities, except those carried out under the ‘Widening participation and spreading excellence’ component of the programme (part of ‘Widening participation and strengthening the European Research Area’). Also eligible are bottom-up coordination actions which promote cooperation between legal entities from Member States and Associated Countries to strengthen the European Research Area, and which receive no EU co-funding for research activities.

Programme co-fund actions (CoFund) — A programme of activities established or implemented by legal entities managing or funding R&I programmes, other than EU funding bodies. Such a programme of activities may support: networking and coordination; research; innovation; pilot actions; innovation and market deployment; training and mobility; awareness raising and communication; and dissemination and exploitation. It may also provide any relevant financial support, such as grants, prizes and procurement, as well as Horizon Europe blended finance²⁹ or a combination thereof. The actions may be implemented by the beneficiaries directly or by providing financial support to third parties.

Innovation and market deployment actions (IMDA) — Activities that embed an innovation action and other activities necessary to deploy an innovation on the market. This includes the scaling-up of companies and Horizon Europe blended finance.

Training and mobility actions (TMA) — Activities that aim to improve the skills, knowledge and career prospects of researchers, based on mobility between countries and, if relevant, between sectors or disciplines.

Pre-commercial procurement actions (PCP) — Activities that aim to help a transnational buyers’ group to strengthen the public procurement of research, development, validation and, possibly, the first deployment of new solutions that can significantly improve quality and efficiency in areas of public interest, while opening market opportunities for industry and researchers active in Europe. Eligible activities include the preparation, management and follow-up, under the coordination of a lead procurer, of one joint PCP and additional activities to embed the PCP into a wider set of demand-side activities.

²⁹ ‘Horizon Europe blended finance’ means financial support for innovation and market deployment activities, consisting of a specific combination of a grant or reimbursable advance and an investment in equity or any other repayable form of support.

Public procurement of innovative solutions actions (PPI) — Activities that aim to strengthen the ability of a transnational buyers' group to deploy innovative solutions early by overcoming the fragmentation of demand for such solutions and sharing the risks and costs of acting as early adopters, while opening market opportunities for industry. Eligible activities include preparing and implementing, under the coordination of a lead procurer, one joint or several coordinated PPI by the buyers' group and additional activities to embed the PPI into a wider set of demand-side activities.

Technology Readiness Levels

Where the specific call/topic conditions require a Technology Readiness Level (TRL), the following definitions apply, unless otherwise specified:

- TRL 1 — Basic principles observed
- TRL 2 — Technology concept formulated
- TRL 3 — Experimental proof of concept
- TRL 4 — Technology validated in a lab
- TRL 5 — Technology validated in a relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 6 — Technology demonstrated in a relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 7 — System prototype demonstration in an operational environment
- TRL 8 — System complete and qualified
- TRL 9 — Actual system proven in an operational environment (competitive manufacturing in the case of key enabling technologies, or in space)

Ethics

Projects must comply with ethical principles (including the highest standards of research integrity) and applicable EU, international and national law.

Applicants must have completed the ethics self-assessment as part of their application.

 For more information, see [How to complete your ethics self-assessment](#).

Projects involving ethics issues will have to undergo an ethics review to authorise funding and may be made subject to specific ethics requirements. These requirements become part of the grant agreement as ethics deliverables, e.g. ethics committee opinions/authorisations required under national or EU law.

Security — EU classified and sensitive information

Projects involving classified and/or sensitive information will have to go through the security appraisal process to authorise funding and may be made subject to specific security rules (detailed in the Security Section, which is annexed to the grant agreement). Specific provisions for EU classified information (EUCI) and sensitive information (SEN) will be included in the grant agreement, as necessary and appropriate.

The rules for protecting EU classified information (governed by Commission Decision (EU, Euratom) [2015/444](#)³⁰ and/or national rules) provide for instance that:

- projects involving information classified as TRES SECRET UE/EU TOP SECRET (or equivalent) can NOT be funded;
- EU classified information must be marked in accordance with the applicable security instructions in the Security Classification Guide appendix of the Security Aspects Letter (SAL), which is contained in the Security Section of the grant agreement;
- generation of, or access to, information with classification levels CONFIDENTIEL UE/EU CONFIDENTIAL or above (and RESTREINT UE/EU RESTRICTED, if required by national rules) may take place only on the premises of entities which have been granted a facility security clearance (FSC) issued by the competent national security authority (NSA);
- handling of information classified CONFIDENTIEL UE/EU CONFIDENTIAL or above (and RESTREINT UE/EU RESTRICTED, if required by national rules) may take place only in a secured area accredited by the competent NSA;
- access to and handling of information classified CONFIDENTIEL UE/EU CONFIDENTIAL or above may be granted only to individuals with a valid personnel security clearance (PSC) and an established need-to-know, who have been briefed on the applicable security rules;
- access to, and handling of, information classified RESTREINT UE/EU RESTRICTED may be granted only to individuals who have a need-to-know and have been briefed on the applicable security rules;
- at the end of the grant, the classified information must either be returned or continue to be protected according to the applicable rules;
- subcontracting of tasks involving EU classified information is subject to prior written approval by the European Commission, which is the originator of EU classified information. It is only possible to subcontract these tasks to entities established in an EU Member State or in a non-EU country with a security of information agreement with the EU (or an administrative arrangement with the Commission);

³⁰ See Commission Decision (EU, Euratom) 2015/444 of 13 March 2015 on the security rules for protecting EU classified information (OJ L 72, 17.3.2015, p. 53).

- disclosure of EU classified information is subject to prior written approval by the European Commission.

Depending on the type of activity, FSCs may have to be provided before the grant is signed. The granting authority will assess this for each case and fix the delivery date during the grant preparation stage. It is not possible to sign any grant agreement before at least one of the beneficiaries in the consortium has an FSC.

In certain cases, the project results might not require classification, but they might be sensitive and require restricted disclosure or limited dissemination for security reasons, according to the applicable instructions in the Security Section. This means that, in principle, third parties should have no access to results subject to this type of restriction. Disclosure of this information is subject to prior written approval by the European Commission.

Further security recommendations may be added to the grant agreement in the form of security deliverables (e.g. establishing a security advisory board, appointing a project security officer, limiting the level of detail, using a fake scenario, etc.).

In addition, beneficiaries must ensure that their projects are not subject to national/third-country security requirements that could affect implementation or put into question the award of the grants (e.g. technology restrictions, national security classification, etc.). Any potential security issues must be notified immediately to the granting authority.

Gender equality plans and gender mainstreaming

Beneficiaries must take all measures to promote equal opportunities between men and women in implementing the action and, where applicable, in line with their gender equality plan. They must aim to achieve, to the extent possible, a gender balance at all levels of personnel assigned to the action, including at supervisory and managerial level.

In addition, to be eligible, legal entities from Member States and Associated Countries that are public bodies, research organisations or higher education establishments (including private research organisations and higher education establishments) must have a gender equality plan, covering the following minimum process-related requirements:

- publication: a formal document published on the institution's website and signed by the top management;
- dedicated resources: commitment of resources and expertise in gender equality to implement the plan;
- data collection and monitoring: sex/gender disaggregated data on personnel (and students, for the establishments concerned) and annual reporting based on indicators;
- training: awareness raising/training on gender equality and unconscious gender biases for staff and decision-makers.

Content-wise, it is recommended that the gender equality plan addresses the following areas, using concrete measures and targets:

- work-life balance and organisational culture;
- gender balance in leadership and decision-making;
- gender equality in recruitment and career progression;
- integration of the gender dimension into research and teaching content;
- measures against gender-based violence, including sexual harassment.


A self-declaration will be requested at proposal stage. If all the above-mentioned mandatory requirements are met through another strategic document, such as a development plan or an inclusion or diversity strategy, it can be considered as an equivalent. This eligibility criterion does not apply to other categories of legal entities, such as private for-profit organisations, including SMEs, non-governmental or civil society organisations.

Financial support to third parties

Where the specific call/topic conditions allow for financial support to third parties, the applicants must clearly describe in their proposal the objectives and the expected results, including the elements listed in the application template. The following conditions must also be fulfilled:

- projects must publish their open calls widely and adhere to EU standards of transparency, equal treatment, conflict of interest and confidentiality;
- all calls for third parties and all calls that are implemented by third parties must be published on the Funding & Tenders Portal, and on the beneficiaries' websites;
- the calls must remain open for at least 2 months;
- if submission deadlines are changed, this must immediately be announced and registered applicants must be informed of the change;
- projects must publish the outcome of the calls without delay, including a description of third-party projects, the date of the award, the duration, and the legal name of the third party and country of establishment;
- the calls must have a clear European dimension.

Further conditions may be stipulated in the specific conditions for the topic.

 For more information, see AGA — *Annotated Model Grant Agreement*, Articles 6.2.D.1 and 9.4.

OTHER TYPES OF ACTIONS AND FORMS OF FUNDING

The following types of action and forms of funding are also used in Horizon Europe. They are usually placed in the 'Other Actions' section of the work programme parts and are not all subject to calls for proposals.

- **Grants to identified beneficiaries** — Exceptionally, a grant may be awarded to legal entities explicitly named in the work programme without a prior call for proposals. The identified beneficiaries must nevertheless submit a proposal to benefit from funding. This proposal will be evaluated and must meet the required threshold. The funding rates will correspond to the type of action indicated.
- **Prizes** — Prize means a financial contribution given as a reward following a contest. *Inducement prizes*: a prize to stimulate investment in a given area, by specifying a goal prior to the work being performed. Contests for inducement prizes must address technological and/or societal challenges. The award criteria will define a goal, but without prescribing how to achieve it. Contests for inducement prizes are split into awards for the contestant that first meets the specific goal defined in the rules of the contest, and awards for the best contestant within a given period. *Recognition prizes*: a prize to reward past achievements and outstanding work after it has been performed. Recognition prizes must help to raise public awareness of EU policies, create role models and support best practice exchange. The Rules of the contest of a specific prize provide for the admissibility, eligibility, exclusion and award criteria, the prize amount and categories (if applicable) the evaluation procedure, the indicative timetable and the modalities of payment. The rules are found on the call topic page on the Funding & Tenders Portal.
- **Framework partnerships and specific grant agreements** — Framework partnerships are formalised long-term cooperation mechanisms involving several or recurring grants. They must be based on jointly agreed action plans and agreements that set out the terms and conditions for receiving grants to implement the actions, framework partnership agreements (FPA) and specific grant agreements (SGA). The FPA will set out the framework conditions governing potential grants to beneficiaries on the basis of an action plan and jointly agreed general objectives. The SGA will set out the specific obligations and conditions to implement the specific action. The FPA will have no budget; the budget and rules on funding will be set out in each SGA and depend on the specific type of action. The establishment of an FPA must take place following a call for proposals. Beneficiaries will be identified from the evaluation of the proposals. In a subsequent step, beneficiaries may be invited to submit their proposals for the SGA. Framework partnerships do not give the partners (i.e. potential beneficiaries) exclusive rights to be awarded the grants covered by the FPAs. SGAs must only be signed if the FPA has been signed, and before the end date of the FPA.
- **Operating grants** — Operating grants provide financial support for the functioning of a body to enable it to carry out specific activities set out in the agreed work programme. Operating grants do not support the implementation of a specific action, but rather the annual operating budget (or part of it) for certain bodies whose statutory activities serve the strategic objectives of EU policies. Operating grants will always be mono-beneficiary grants supporting the work programme of only one organisation. Operating grants must follow the same rules as described in Annex G, but they do not differentiate between direct and indirect costs. Receiving an operating grant may make beneficiaries ineligible to receive indirect costs in all other EU action grants.
- **Public procurement** — In a public procurement action, the granting authority purchases works, supplies or services, or acquires or rents land, buildings or other immovable property. This is done by entering into a contract with an economic operator chosen by the granting authority. Before the granting authority enters into a procurement contract, a call for tender is published on the Funding & Tenders Portal.
- **Expert contract actions** — Expert contracts are used to appoint independent expert(s) to advise or assist us. Experts are used for evaluating proposals, for evaluating the programme, for ethics screenings and assessments, for advisory bodies, and for expertise related to the objectives of Horizon Europe.
- **Subscription actions** — Subscription actions are used to pay contributions to bodies in which the EU is a member or an observer.
- **Scientific and technical services by the Joint Research Centre** — Scientific and technical services cover research and innovation activities undertaken by the Commission through its Joint Research Centre. These (non-nuclear) activities are direct actions generating high-quality scientific evidence to support efficient and affordable public policies. Horizon Europe's rules for participation do not apply to these actions.
- **Indirectly managed actions** — Indirectly managed actions refer to actions implemented by entities which are entrusted with implementing EU funds or budgetary guarantees through a contribution agreement.
- **Service level agreement actions** — These are actions implemented through a service level agreement. Service level agreements include agreements between Commission departments or, agreements that the Commission may conclude with another Union institution, Union body, or European office involving the provision of services.

C — Financial and operational capacity and exclusion

Financial capacity

Applicants must have **stable and sufficient resources** to successfully implement the projects and contribute their share. Organisations participating in several projects must have sufficient capacity to implement all these projects.

The financial capacity check will be done on the basis of the documents uploaded in the [Participant Register](#) during the grant preparation stage (e.g. profit and loss account and balance sheet, business plan, audit report produced by an approved external auditor, certifying the accounts for the last closed financial year, etc.). The analysis will be based on neutral financial indicators, but will also take into account other aspects, such as dependency on EU funding and deficit and revenue in previous years.

The check will normally be done for the coordinator if the requested grant amount is equal to or greater than EUR 500 000, except for:

- public bodies (entities established as a public body under national law, including local, regional or national authorities) or international organisations; and
- cases where the individual requested grant amount is not more than EUR 60 000 (low-value grant).

If needed, it may also be done for the other applicants, including affiliated entities. If the financial capacity is structurally guaranteed by another legal entity, the financial capacity of that legal entity will be verified.

If the granting authority considers that the financial capacity is not satisfactory, they may require:

- further information;
 - an enhanced financial responsibility regime, i.e. joint and several responsibility of affiliated entities (*see Annex G below*); and
 - prefinancing paid in instalments;
- or
- propose no prefinancing;
 - request that the applicant concerned is replaced or, if needed, reject the entire proposal.

i For more information, see [Rules on Legal Entity Validation, LEAR Appointment and Financial Capacity Assessment](#).

Operational capacity

Applicants must have the **know-how, qualifications** and **resources** to successfully implement their tasks in the project and contribute their share (including, when appropriate, sufficient experience in EU/transnational projects of comparable size).

This assessment of operational capacity will be carried out during the evaluation of the award criterion ‘Quality and efficiency of the implementation’. It will be based on the competence and experience of the applicants and their project teams, including their operational resources (human, technical and other) or, exceptionally, the measures proposed to obtain the necessary competence and experience by the time the tasks are implemented.

If the evaluation of this award criterion leads to a score above the applicable threshold, then the applicants are considered to have sufficient operational capacity.

For this assessment, applicants will be required to provide the following information in the application form:

- description of the consortium participants; and
- for each participant:
 - identity of researchers involved in the proposal (through the researchers table);
 - up to five most relevant publications, widely-used datasets, software, goods, services, or any other achievements relevant to the call content;
 - up to five most relevant previous projects or activities, connected to the subject of this proposal; and
 - description of any significant infrastructure and/or any major items of technical equipment, relevant to the proposed work.

Additional supporting documents may be requested if they are needed to confirm the operational capacity of any applicant.

Public bodies, Member State organisations and international organisations are exempted from the operational capacity check.

Exclusion

Applicants that are subject to **EU administrative sanctions** (i.e. exclusion)³¹ or are in one of the following **exclusion situations**³² that bar them from receiving EU grants can NOT participate:

³¹ See Article 136 EU Financial Regulation [2018/1046](#).

³² See Articles 136 and 141 EU Financial Regulation [2018/1046](#).

- bankruptcy, winding up, affairs administered by the courts, arrangement with creditors, suspended business activities or other similar procedures (including procedures for persons with unlimited liability for the applicant's debts);
- they are in breach of social security or tax obligations (including if done by persons with unlimited liability for the applicant's debts);
- they are guilty of grave professional misconduct (including if done by persons having powers of representation, decision-making or control, beneficial owners or persons who are essential for the award/implementation of the grant);
- they are guilty of fraud, corruption, having links to a criminal organisation, money laundering, terrorism-related crimes (including terrorism financing), child labour or human trafficking (including if done by persons having powers of representation, decision-making or control, beneficial owners or persons who are essential for the award/implementation of the grant);
- they have shown significant deficiencies in complying with their main obligations under an EU procurement contract, grant agreement, prize, expert contract, or similar (including if done by persons having powers of representation, decision-making or control, beneficial owners or persons who are essential for the award/implementation of the grant);
- they are guilty of irregularities within the meaning of Article 1(2) of Regulation No [2988/95](#)³³ (including if done by persons having powers of representation, decision-making or control, beneficial owners or persons who are essential for the award/implementation of the grant); or
- they have created under a different jurisdiction an entity with the intent to circumvent fiscal, social or other legal obligations in the country of origin or created another entity with this purpose (including if done by persons having powers of representation, decision-making or control, beneficial owners or persons who are essential for the award/implementation of the grant).

Applicants will also be refused if they³⁴:

- have misrepresented the information required as a condition for participating in the procedure or have failed to supply that information; or
- were previously involved in the preparation of documents used in the award procedure where this entails a breach of the principle of equality of treatment, including distortion of competition, that cannot be remedied otherwise.

³³ Council Regulation (EC, Euratom) No 2988/95 of 18 December 1995 on the protection of the European Communities financial interests, (OJ L 312, 23.12.1995, p. 1).

³⁴ See Article 141 EU Financial Regulation [2018/1046](#).

D — Award criteria

Award criteria

If admissible and eligible, the proposals will be evaluated and ranked against the following **award criteria**³⁵, depending on the type of action:

	Excellence (The following aspects will be taken into account, to the extent that the proposed work corresponds to the description in the work programme)	Impact	Quality and efficiency of the implementation
Research and innovation actions (RIA) Innovation actions (IA)	<ul style="list-style-type: none"> - Clarity and pertinence of the project’s objectives, and the extent to which the proposed work is ambitious and goes beyond the state of the art. - Soundness of the proposed [for the first stage: overall(*)] methodology, including the underlying concepts, models, assumptions, inter-disciplinary approaches, appropriate consideration of the gender dimension in research and innovation content, and the quality of open science practices, including sharing and management of research outputs and engagement of citizens, civil society 	<ul style="list-style-type: none"> - Credibility of the pathways to achieve the expected outcomes and impacts specified in the work programme, and the likely scale and significance of the contributions from the project. - Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities. 	<ul style="list-style-type: none"> - Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall. - Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise.

³⁵ For two-stage submission procedures, only the aspects in bold are considered for the evaluation of first-stage applications. See “Two-stage calls” below in this General Annex.

	<p>and end-users where appropriate.</p> <p>(*) Including all aspects mentioned in the first stage proposal template, which also include the integration of the gender dimension in research and innovation content as well as open science practices.</p>		
Coordination and support actions (CSA)	<ul style="list-style-type: none"> - Clarity and pertinence of the project's objectives. - Quality of the proposed coordination and/or support measures, including soundness of methodology. 	<ul style="list-style-type: none"> - Credibility of the pathways to achieve the expected outcomes and impacts specified in the work programme, and the likely scale and significance of the contributions from the project. - Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities. 	<ul style="list-style-type: none"> - Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall. - Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise.
Programme co-fund actions (CoFund)	<ul style="list-style-type: none"> - Clarity and pertinence of the project's objectives, and the extent to which the proposed work is ambitious, and goes beyond the state of the art. - Soundness of the proposed methodology, including the underlying concepts, models, assumptions, inter-disciplinary 	<ul style="list-style-type: none"> - Credibility of the pathways to achieve the expected outcomes and impacts specified in the work programme, and the likely scale and significance of the contributions from the project. - Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the 	<ul style="list-style-type: none"> - Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall. - Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise.

	approaches, appropriate consideration of the gender dimension in research and innovation content, and the quality of open science practices, including sharing and management of research outputs and engagement of citizens, civil society and end-users where appropriate.	dissemination and exploitation plan, including communication activities.	
Innovation and market deployment actions (IMDA)	<i>See the European Innovation Council Work Programme.</i>		
Training and mobility actions (TMA)	<i>See the Marie Skłodowska-Curie Actions Work Programme part 2.</i>		
Pre-commercial procurement actions (PCP) Public procurement of innovative solutions actions (PPI)	<ul style="list-style-type: none"> - Clarity and pertinence of the objectives and the extent to which they are ambitious, and go beyond the state of the art in terms of the degree of innovation that is needed to satisfy the procurement need. - Soundness of the proposed methodology, taking into account the underlying concepts and assumptions. 	<ul style="list-style-type: none"> - Credibility of the pathways to achieve the expected outcomes and impacts specified in the work programme. - Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation* plan, including communication activities. <p style="font-size: small; margin-top: 10px;">* For PCP actions and PPI actions, the exploitation of results by the beneficiaries means primarily the use that is made of the innovative solutions</p>	<ul style="list-style-type: none"> - Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall. - Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise.

		by the procurers/end-users. The manufacturing and sale of the innovative solutions are performed by the suppliers of the solutions, which are not beneficiaries but subcontractors.	
Framework Partnership Agreements (FPA)	- Clarity and pertinence of the project's objectives.	- Credibility of the action plan of the FPA to achieve the expected outcomes and impacts specified in the work programme.	- Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise. - Potential for long-term cooperation among participants.

Scores and weighting

Evaluation scores will be awarded for the criteria, and not for the different aspects listed in the table. For full applications, each criterion will be scored out of 5. The threshold for individual criteria will be 3. The overall threshold, applying to the sum of the three individual scores, will be 10.

To determine the ranking for 'Innovation actions', the score for 'Impact' will be given a weight of 1.5.

Proposals that pass the individual threshold AND the overall threshold will be considered for funding, within the limits of the available call budget. Other proposals will be rejected.

Two-stage calls

For the evaluation of first-stage applications under a two-stage submission procedure, only the 'Excellence' and 'Impact' criteria will be evaluated. Within these criteria, only the aspects in **bold** will be considered.

The threshold for both individual criteria will be 4. For each indicative budget-split in the call conditions, the overall threshold applying to the sum of the two individual scores will be set at a level that ensures the total requested budget of proposals admitted to stage 2 is as close as possible to three times the available budget, and not less than two and a half times the available budget. The actual level will therefore depend on the volume of proposals received. The threshold is expected normally to be set at 8 or 8.5.

The evaluation procedure is explained further in *Annex F below*.

E — Documents

Submission

All proposals must be submitted **electronically** via the Funders & Tenders Portal electronic submission system (accessible via the topic page in the [Search Funding & Tenders](#) section). Paper submissions are NOT possible.

Proposals must be **complete** and contain all parts and mandatory annexes and supporting documents.

The application form will have two parts:


- **Part A** (to be filled in directly online) contains administrative information about the applicant organisations (future coordinator and beneficiaries and affiliated entities), the summarised budget for the proposal and call-specific questions;
- **Part B** (to be downloaded from the Portal submission system, completed and then assembled and re-uploaded as a PDF in the system) contains the technical description of the project.

Annexes and supporting documents will be directly available in the submission system and must be uploaded as PDF files (or other formats allowed by the system).

Proposals should be designed to stay as close as possible to the award criteria (*see Annex D above*). The application form will help to achieve this.

When submitting the proposal, the coordinator will have to confirm that they have the mandate to act for all applicants. Moreover, they will have to confirm that the information in the application is correct and complete and that all participants comply with the conditions for receiving EU funding (especially eligibility, financial and operational capacity, exclusion, etc.). Proposals not complying with these requirements will be rejected. Before signing the grant, each participant will have to confirm this again by signing a declaration of honour.

For lump sum grants proposals, the estimated budget must be described in a detailed budget table. This will be used as a basis for justifying and/or fixing the lump sum amount. As the lump sum must be an approximation of the costs actually incurred, the costs included in this detailed budget table must comply with the basic eligibility conditions for EU actual cost grants (*see AGA — Annotated Grant Agreement, Article 6*). This is particularly important for purchases and subcontracting, which must ensure best value for money (or, if appropriate, the lowest price) and be free from any conflicts of interest. If the budget table contains ineligible costs, the grants may be reduced (even later on during implementation of the project or after they end). Exceptionally, the Decision authorising the use of lump sum funding for a specific action might specify that a detailed budget table is not required.

 Applicants may be asked at a later stage for further documents (for legal entity validation, financial capacity check, bank account validation, etc.).

F — Procedure

Evaluation procedure and ranking

Calls may be subject to either a **single-stage submission procedure** or a **two-stage submission procedure**. The **evaluation procedure** may be organised in one (standard) or several steps.

In the first stage of a two-stage submission, applicants will be requested to submit only an outline application (which will be evaluated against only two award criteria: ‘Excellence’ and ‘Impact’). Successful applicants will be invited to submit a full application for the second stage (which will be evaluated against the full set of award criteria).

Proposals will be checked for formal requirements (admissibility and eligibility) and then evaluated (for each topic separately) by an **evaluation committee** composed of independent external experts for operational capacity and award criteria (*see Annexes C and D above*) and then ranked according to their quality score.

For lump sum grants proposals, comments on the detailed lump sum budget table will be provided in the Evaluation Summary Report only for proposals invited to grant agreement preparation (or placed in the reserve list) and ones rejected (in part) due to significant overestimation or underestimation of costs.

Exceptionally, where indicated in the specific call/topic conditions, the evaluation committee may be composed partially or, in the case of ‘Coordination and support actions’, partially or fully of representatives of EU institutions.

For proposals with the same score within a single budget envelope (with the exception of the first stage of two-stage submissions) a method to establish the **priority order** will be determined, taking into consideration the objectives of the specific topic. In the absence of special arrangements in the specific call/topic conditions, the following method will apply:


For each group of proposals with the same score, starting with the group achieving the highest score and continuing in descending order:


- 1) Proposals that address aspects of the call that have not otherwise been covered by more highly ranked proposals will be considered to have the highest priority.
- 2) The proposals identified under 1), if any, will themselves be prioritised according to the scores they have been awarded for ‘Excellence’. When these scores are equal, priority will be based on scores for ‘Impact’. In the case of ‘Innovation actions’, priority will be given to the score for ‘Impact’, followed by that for ‘Excellence’.
- 3) If necessary, the gender balance among the researchers named in the researchers table in the proposal, will be used as a factor for prioritisation.
- 4) If necessary, any further prioritisation will be based on geographical diversity, defined as the number of Member States or Associated Countries represented in the proposal,


not otherwise receiving funds from projects higher up the ranking list (and if equal in number, then by budget).


- 5) If a distinction still cannot be made, the panel may decide to further prioritise by considering other factors related to the objectives of the call, or to Horizon Europe in general. These may include, for example, enhancing the quality of the project portfolio through synergies between projects or, where relevant and feasible, involving SMEs. These factors will be documented in the panel report.
- 6) The method described in 1), 2), 3) and 4) will then be applied to the remaining equally ranked proposals in the group.


At the end of the evaluation, all applicants will be informed of the result in an evaluation result letter. Successful proposals will be invited to the next stage, 'grant preparation'; the other proposals will be put on the reserve list or rejected.

 No commitment to provide funding — Invitation to the grant preparation stage does NOT constitute a formal commitment to funding. Various legal checks are still needed before the grant can be awarded, such as legal entity validation, financial capacity verification, exclusion check, etc.

 If indicated in the specific call/topic conditions, proposals which were judged to deserve funding but did not succeed because of budget limits will receive a **Seal of Excellence**³⁶. With prior authorisation from the applicant, the granting authority may share information concerning the proposal and the evaluation with interested financing authorities, subject to the conclusion of confidentiality agreements.

 Budget flexibility — The budgets set out in the calls and topics are indicative. Unless otherwise stated, final budgets may change following evaluation. The final figures may change by up to 20% compared to the total budget indicated in each individual part of the work programme. Changes within these limits will not be considered substantial within the meaning of Article 110(5) of Regulation (EU, Euratom) No 2018/1046.

 Joint calls for proposals — In cases of applications for **joint calls** with third countries (including scientific and technological organisations or agencies from third countries), international organisations or non-profit legal entities, the joint selection and evaluation procedures will be indicated in the specific call/topic conditions.

 Blind evaluation pilot – If indicated in the specific call/topic conditions, first-stage proposals of two-stage submissions will be evaluated blindly³⁷ and applicants must not disclose their identity in Part B of their proposal (*see Annex A above*).

Evaluation review procedure

³⁶ https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/seal-excellence_en.

³⁷ See Horizon Europe Programme Guide for further details.

If the consortium believes that the evaluation procedure was flawed, the coordinator can submit a **complaint** (following the deadlines and procedures also set out in the evaluation result letter).

Only the procedural aspects of an evaluation may be the subject of a request for an evaluation review. The evaluation of the merits of a proposal will not be the subject of an evaluation review.

A request for an evaluation review must relate to a specific proposal and must be submitted within 30 days after the beneficiary accesses the evaluation results. The deadlines will be counted from the date of opening/access. The maximum size limit of the request is 7 000 characters. Notifications of evaluation results which have not been opened in the Funding & Tenders Portal within 10 days after sending are considered to have been accessed (*see also [Funding & Tenders Portal Terms and Conditions](#)*).

An evaluation review committee will provide an opinion on the procedural aspects of the evaluation. The evaluation review committee may recommend a re-evaluation of the proposal, to be carried out primarily by evaluators who were not involved in the previous evaluation, or a confirmation of the initial evaluation.

Indicative timetable for evaluation and for signature of the grant agreement

Unless otherwise stated in the specific call/topic conditions, the timing for evaluation and grant preparation is as follows:

- information on the outcome of the evaluation: around 5 months from the deadline for submission;
- indicative date for the signing of grant agreements: around 8 months from the deadline for submission.

For two-stage calls, the timing is different (for the evaluation result: around 3 months from the deadline for submission for the first stage, and around 5 months from the deadline for submission for the second stage, for signature of the grant agreement around 8 months from in the second stage deadline for submission).

G — Legal and financial set-up of the grant agreements

During the grant preparation stage, the consortium will be asked to prepare the [grant agreement](#), together with the EU project officer.

This grant agreement will set out the framework for the grant and its terms and conditions, particularly concerning deliverables, reporting and payments. The applicable model with the complete text of the provisions is available on the topic page, together with the other call documentation.

Starting date & project duration

The project starting date and duration will be fixed in the grant agreement (*see Data Sheet, point 1*). Normally, the starting date will be after the grant has been signed. A starting date before the date the grant is signed (retroactive) can be granted exceptionally for duly justified reasons, if agreed with the granting authority³⁸.

The project duration is provided in months (extensions will be possible only exceptionally, for duly justified reasons and if the granting authority agrees).

Milestones and deliverables

The milestones and deliverables for each project will be managed through the grant management system in the Portal and are reflected in Annex 1 of the grant agreement.

The standard deliverables will be set out in the specific call/topic conditions.

Form of grant, funding rate and maximum grant amount

The grant parameters (maximum grant amount, funding rate, total eligible costs, etc.) will be fixed in the grant agreement (*Data Sheet, point 3 and Article 5*).

The project budget is provided in EUR. The amount of the grant awarded may be lower than the amount requested.

For **actual cost grants**, the grant will be a budget-based, mixed actual cost grant. This means that it will reimburse **ONLY** certain types of costs (eligible costs) and **ONLY** those costs *actually* incurred for the project (NOT the *budgeted* costs).

The costs will be reimbursed at the funding rate fixed in the specific call/topic conditions and in the grant agreement.

Such grants may NOT produce a profit. If there is a profit (i.e. surplus of revenues + EU grant over costs), it will be deducted from the final grant amount.

Moreover, the final grant amount may be reduced in case of non-compliance (e.g. improper implementation, breach of obligations, etc.).

³⁸ See Article 193 EU Financial Regulation [2018/1046](#).

The maximum Horizon Europe funding rates are as follows:

- Research and innovation action: 100%
- Innovation action: 70% (except for non-profit legal entities, where a rate of up to 100% applies)
- Coordination and support action: 100%
- Programme co-fund action: between 30% and 70%
- Innovation and market deployment: 70% (except for non-profit legal entities, where a rate of up to 100% applies)
- Training and mobility action: 100%
- Pre-commercial procurement action: 100%
- Public procurement of innovative solutions action: 50%

Other funding rates may be set out in the specific call/topic conditions.

For **lump sum and unit grants**, the funding rate is already applied as part of the methodology for fixing the amounts and is therefore not shown in the grant agreement.

Budget categories and cost eligibility rules

The budget categories and cost eligibility rules are fixed in the grant agreement (*see Data Sheet, point 3 and Article 6*).

Budget categories:

- actual costs (i.e. costs which are real and not estimated or budgeted) for:
 - personnel costs (unless declared as a unit cost; see below);
 - subcontracting costs;
 - purchase costs (unless declared as a unit cost; see below); and
 - costs of providing financial support to third parties (if provided for in the specific call conditions);
- units (i.e. an amount per unit) for:
 - personnel costs of SME owners/natural persons not receiving a salary;
 - personnel costs calculated by the beneficiaries according to their usual cost accounting practices (average personnel costs);
 - costs of internally invoiced goods and services calculated by the beneficiaries according to their usual cost accounting practices; and

- specific unit costs (if provided for in the specific call/topic conditions; see also Annex 2a of the grant agreement);
- flat-rate (i.e. costs calculated by applying a percentage fixed in advance to other types of eligible costs) for:
 - indirect costs (25% flat-rate of the total eligible direct costs, excluding eligible direct costs for subcontracting, financial support to third parties and any unit costs or lump sums which include indirect costs);
- lump sum (i.e. a global amount deemed to cover all costs of the action or a specific category of costs, if provided for in the specific call/topic conditions).

Within a grant, different forms of costs can be used.

Costs can also be declared under several EU Synergy grants, if the cumulative funding under the grants does not exceed 100% of the eligible costs and the contributions declared to them.

Reporting & payment arrangements

The reporting and payment arrangements are fixed in the grant agreement (*Data Sheet, point 4 and articles 21 and 22*).

After the grant has been signed, the consortium will normally receive a float to start working on the project (normally, pre-financing of 160% of the average EU funding per reporting period (i.e. maximum grant amount/number of periods); exceptionally, less or no pre-financing). For actions with only one reporting period, it will be less, since 100% would mean the totality of the grant amount.

Programme co-fund actions may receive additional pre-financing payments.

Payments will be automatically lowered if one of the consortium members has outstanding debts towards the EU (granting authority or other EU bodies). Such debts will be offset by the granting authority, in line with the conditions set out in the grant agreement (*see Article 22*).

At the moment of the prefinancing payment, an amount ranging from 5% to 8% of the maximum grant amount will be deducted from the prefinancing payment and transferred to the mutual insurance mechanism. This mechanism covers the risks associated with non-recovery of sums due from the beneficiaries.

There will be one or several interim payments linked to a periodic report, depending on the duration of the project.

At the end of the project, the consortium will be invited to submit a report on the basis of which the final grant amount will be calculated. If the total of earlier payments is higher than the final grant amount, the beneficiaries concerned (or the coordinator) will be asked to pay back the difference (recovery).

Certificates

Depending on the size of the grant amount and on the type of beneficiaries, beneficiaries may be required to submit a certificate on the financial statements. The thresholds for this certificate are fixed in the grant agreement (*Data Sheet, point 4 and Article 24*).

Liability regime for recoveries

The liability regime for recoveries is that of individual financial responsibility. Each beneficiary is liable only for their own debt (and those of its affiliated entities, if any) (*Data Sheet point 4.4 and Article 22*).

Provisions concerning project implementation

- Proper implementation of the action (*Article 11*).
- Conflict of interest (*Article 12*).
- Confidentiality and security (EU classified information) (*Article 13 and Annex 5*).
- Ethics (research integrity) and values (gender mainstreaming) (*Article 14 and Annex 5*).
- Data protection (*Article 15*).
- Intellectual Property Rights (IPR), background and results, access rights and rights of use (*Article 16 and Annex 5*). In addition to the standard provisions, the following specific provisions in the model grant agreement will apply to all grants awarded under this work programme:

Additional exploitation obligations in case of a public emergency: If requested by the granting authority, beneficiaries must grant non-exclusive licences to their results – for a limited period of time specified in the request and on fair and reasonable conditions – to legal entities that need the results to address the public emergency. These legal entities must commit to rapidly and broadly exploiting the resulting products and services on fair and reasonable conditions. This provision will apply up to 4 years after the end of the action.

Additional information obligation relating to standards: Unless stated otherwise in the specific call conditions, beneficiaries must, up to 4 years after the end of the action, inform the granting authority if the results could reasonably be expected to contribute to European or international standards.

Granting authority right to object to transfers or licensing — Horizon Europe actions: The granting authority may, up to 4 years after the end of the action, object to a transfer of ownership or to the exclusive licensing of results, as set out in the specific provision of Annex 5.

- Communication, dissemination, open science and visibility (*Article 17 and Annex 5*). In addition to the standard provisions, the following specific provisions in the model grant agreement will apply to all grants awarded under this work programme:

Open science - additional practices, validation of scientific publications:

Beneficiaries must provide (digital or physical) access to data or other results needed to validate the conclusions of scientific publications, to the extent that their legitimate interests or constraints are safeguarded (and unless they already provided the (open) access at publication).

Open science - additional practices, public emergency: In case of a public emergency, if requested by the granting authority, beneficiaries must immediately deposit any research output in a repository and provide open access to it under a CC BY licence, a public domain dedication (CC 0) or equivalent.

As an exception, if providing open access would be against the beneficiaries' legitimate interests, the beneficiaries must grant non-exclusive licences, on fair and reasonable conditions, to legal entities that need the research output to address the public emergency. These legal entities must commit to rapidly and broadly exploiting the resulting products and services on fair and reasonable conditions. This exception is limited to 4 years after the end of the action.

- Specific rules for carrying out the action (*Article 18 and Annex 5*).

Other provisions may be set out in the specific call/topic conditions.

Non-compliance and breach of contract

The grant agreement (*Chapter 5*) provides for the measures that may be taken in case of breach of contract (and other violations of law).

 For more information, see the [AGA — Annotated Grant Agreement](#).



IMPORTANT

- **Do not wait until the end** — Complete the application sufficiently in advance of the deadline to avoid any last minute **technical problems**. Problems due to last-minute submissions (*e.g. congestion, etc.*) will be entirely at applicants' own risk. Call deadlines can NOT be extended at the request of applicants.
- **Consult** the topic page on the Portal regularly. The granting authority will use it to publish updates and additional information on the call (call updates).
- **Funding & Tenders Portal electronic exchange system** — By submitting the application, all applicants **accept** to use the electronic exchange system in accordance with the [Portal Terms & Conditions](#).
- **Registration** — Before submitting the application, all beneficiaries, affiliated entities and associated partners must be registered in the [Participant Register](#). The participant identification code (PIC) (one per participant) is mandatory for the application form. For validation, beneficiaries and affiliated entities will be requested to upload the necessary documents showing their legal status and origin during the grant preparation stage. Associated partners do not need validation.
- **Consortium roles** — When setting up the consortium, applicants should think of organisations that can help them reach objectives and solve problems.

The roles should be attributed according to the degree of participation of each participant in the project. Main participants should participate as beneficiaries or affiliated entities; other entities may participate as associated partners, subcontractors, or third parties giving in-kind contributions, provided that the related conditions are fulfilled. Associated partners and third parties giving in-kind contributions should bear their own costs (they will not become formal recipients of EU funding). Subcontracting should normally constitute a limited part and must be performed by third parties (not by one of the beneficiaries/affiliated entities, *see section G*).

- **Coordinator** — In multi-beneficiary grants, the beneficiaries participate as a consortium (group of beneficiaries). They will have to choose a coordinator among them, who will manage and coordinate the project and will represent the consortium towards the granting authority. In mono-beneficiary grants, the single beneficiary will automatically be the coordinator.
- **Affiliated entities** — Applicants may participate with affiliated entities. Affiliated entities will get a part of the EU funding and must therefore comply with all the call conditions (just like beneficiaries). But they do not sign the grant agreement and do not count towards the minimum eligibility criteria for consortium composition (if any).
- **Associated partners** — Applicants may participate with associated partners. They participate without funding and without signing the grant agreement and therefore do not need to be validated.
- **Consortium agreement** — For practical and legal reasons, participants must conclude a written consortium agreement to ensure the smooth and successful implementation of the action and to deal with exceptional or unforeseen circumstances, unless otherwise provided for in the specific call conditions. The consortium agreement also gives the possibility to redistribute the EU funding according to internal consortium principles and arrangements (for instance, one beneficiary can reattribute their grant share to another beneficiary). The consortium agreement thus allows the grant to be customised to the needs of the consortium and can also help to protect the members in case of disputes. Consortium agreements are not required for mono-beneficiary projects.
- **Completed/ongoing projects** — Applications for projects that have already been completed will be rejected. Applications for projects that have already started will be assessed on a case-by-case basis (in such cases, no costs can normally be reimbursed for activities that took place before the application was submitted).

- **No-profit rule** — Grants may NOT give a profit (i.e. surplus of revenues + EU grant over costs). This will be checked by the granting authority at the end of the project.
- **No double funding** — There is strict prohibition of double funding from the EU budget. Any given action may receive only ONE grant from the EU budget (except for EU Synergy grants) and same costs may under NO circumstances be declared to two different EU actions.
- **Combination with EU operating grants** — Combination with EU operating grants is possible, if the project remains outside the operating grant work programme and the beneficiary makes sure that cost items are clearly separated in its accounting and NOT declared twice (*see [AGA — Annotated Model Grant Agreement, Article 6.2.E](#)*).
- **Multiple applications** — Applicants may submit more than one application for *different* projects under the same call (and be awarded funding for them).

Organisations may participate in several applications.

BUT: if there are several applications for the *same/very similar* project, only one application will be accepted and evaluated.

- **Language** — Applicants can submit their application in any official EU language. However, for reasons of efficiency, it is strongly advised to use English. If applicants need the call documentation in another official EU language, they must submit a request within 10 days after publication of the call (for the contact information, *see topic page*).
- **Rejection** — By submitting the application, all applicants accept the general call conditions set out in the General Annexes and the specific call conditions set out in the topics. Applications that do not comply with all the call conditions will be **rejected**. This applies also to applicants: all applicants need to fulfil the criteria; if any one of them does not, they must be replaced or the entire application will be rejected.
- **Cancellation** — There may be circumstances which may require the cancellation of the call. In this case, applicants will be informed via a call update. Cancellations are without entitlement to compensation.
- **Transparency** — In accordance with Article 38 of the [EU Financial Regulation 2018/1046](#), information about EU grants awarded is published each year on the [Europa website](#).

This includes:

- beneficiaries' names;
- beneficiaries' addresses;
- the purpose for which the grant was awarded;
- the maximum amount awarded.

Publication can exceptionally be waived (following a reasoned and duly substantiated request), if there is a risk that disclosure could jeopardise applicants' rights and freedoms under the EU Charter of Fundamental Rights or harm its commercial interests.

- **Data protection** — The submission of an application under this call involves the collection, use and processing of personal data. This data will be processed in accordance with Regulation [2018/1725](#). It will be processed solely for the purpose of evaluating the application (and subsequent management of the grant and, if needed, programme monitoring, evaluation and communication). Details are explained in the Funding & Tenders Portal privacy statement.

SPECIFIC CONDITIONS FOR ACTIONS WITH PCP/PPI

H — Specific conditions for actions implementing pre-commercial procurement or procurement of innovative solutions

This Annex applies to all types of actions implementing pre-commercial procurement (PCP) and procurement of innovative solutions (PPI). It applies to both PCP/PPI actions and other types of actions which prepare and/or execute a PCP or PPI, for instance through subcontracting activities.

Requirements for all types of actions supporting PCP or PPI

The PCP/PPI must be prepared and executed by one of the following:

- by one or more public procurer(s), plus possibly one or more private and/or NGO procurer(s) that provide similar services of public interest, that is (are) responsible for the acquisition and/or regulatory strategy of the relevant innovative solutions and aim to obtain ambitious quality and efficiency improvements in the area of the PCP/PPI; or
- by entities with a mandate from one or more of these procurers to act on their behalf in the procurement (e.g. central purchasing bodies).

Other entities (e.g. end-users) that do not have a conflict of interest with the PCP/PPI, and whose participation in the action is well justified, may participate in ‘additional activities’ to prepare, manage and follow-up the PCP/PPI and embed it into a wider set of demand-side activities. This includes disseminating results, removing obstacles to introducing the solutions onto the market (e.g. contributing to standardisation, regulation and certification), awareness raising, experience sharing/training, and preparing further cooperation among stakeholders and procurers for future PCP or PPI.

For PCP executed by a group of procurers, the buyers’ group must jointly prepare and implement the pre-commercial procurement so that there is one joint call for tender, one joint evaluation of offers, and a lead procurer³⁹ awarding the research and development (R&D) service contracts in the name and on behalf of the buyers’ group. The PCP must address one concrete procurement need identified as a common challenge⁴⁰, which requires new R&D and is described in the common specifications of the joint PCP call for tender. Each procurer in the buyers’ group must contribute financially to the total budget necessary to jointly finance the PCP, enabling the procurers to share the costs of procuring R&D services from a number of providers and comparing the merits of the alternative solutions pursued by these competing providers to address the common challenge.

³⁹ The ‘lead procurer’ is a public procurer and is the beneficiary appointed by the buyers’ group to coordinate and lead the procurement activities. They can be either one of the procurers in the buyers’ group or another beneficiary in the action who is established or designated by the procurers in the buyers’ group to act as lead procurer.

⁴⁰ Addressing the common challenge in different countries may require, beyond the common core functionality, the development and testing of additional local functionality or adaption of solutions by each procurer due to differences in the local context. A PCP that addresses a challenge consisting of several facets (sub-challenges or building blocks) is considered one joint PCP, as long as all procurers in the buyers’ group share the need for - and are willing to co-finance - all the facets of the common challenge.

For PPI executed by a group of procurers, the lead procurer must coordinate the preparation and implementation of one joint or several coordinated public procurements of innovative solutions, based on common specifications defined jointly by the buyers' group. Each PPI must focus on one concrete need identified as a common challenge that requires the deployment of innovative solutions⁴¹.

Projects that aim to implement a PCP/PPI must contain a preparation and execution stage.

Preparation stage

The expected outcomes for the preparation stage, to be included as deliverables/milestones, are:

- a prior information notice for the open market consultation: 5 days before submission for publication to the OJEU, i.e. a minimum of 50 days before the start of the first meeting;
- a report on the result of the open market consultation, prior market analysis and its impact on the tender documents; in addition, for PPI, feedback from activities to verify market readiness before deployment (e.g. conformance testing, certification, quality labelling);
- completed tender documents based on the Horizon Europe PCP/PPI model contract documents, including the contract notice: 30 days before its submission to the OJEU;
- for PCP/PPI executed by a group of procurers: the signed joint procurement agreement confirming the final means of cooperation, including the financial commitment of the buyers' group for the PCP/PPI, and final confirmation of the lead procurer.

Execution stage

The expected outcome of the execution stage is the implementation of the procurement procedure and of the PCP/PPI contracts. For PCP, this includes validating and comparing the performance of the competing PCP solutions to verify if they can be converted into permanent service. For PPI, this includes deploying the innovative solutions and evaluating the results in real-life operating conditions, with a duration that allows for appropriate evaluation of the potential impact of these solutions if converted into permanent service.

Deliverables/milestones to be included in the description of work for the execution stage are:

- a copy of the contract award notice published in TED: 48 days after the award of contracts;
- at the end of the tender evaluation (for PCP, also after the evaluations of each phase):
 - information on the total number of bids received, particularly the data on the winning tenderer(s) and abstracts of the winning tenders for publication and evaluation purposes;

⁴¹ Addressing the common challenge in different countries may require deployment and, where applicable, conformance testing, of local functionality or adaption of solutions for each procurer due to differences in the local context.

- final ranking list of the selected projects, final scores and qualitative assessment per criterion for each bid received, along with minutes of the evaluation meeting;
- for PCP: assessing the results achieved by each tenderer in the previous phase;
- at the end of the action, give a demonstration to the granting authority:
 - for PCP: of the tested solutions resulting from the PCP;
 - for PPI: of the deployed innovative solution(s).

Where the WTO Government Procurement Agreement (GPA) does not apply, participation in tendering procedures must be open on equal terms to bidders from EU Member States and all countries with which the EU has an agreement in the field of public procurement under the conditions laid down in that agreement, including all Horizon Europe Associated Countries. Where the WTO GPA applies, tendering procedures must also be open to bidders from states that have ratified this agreement, under the conditions laid down therein.

If the specific call conditions restrict participation or control for security reasons, participation in the PCP/PPI procedure must also be limited to bidders meeting this restriction. If the specific conditions for the topic impose a place of performance obligation, the place of performance of the contract must comply with this obligation.

Specific requirements for pre-commercial procurement (PCP)

The following requirements apply to ensure that the provisions for PCP in the Horizon Europe rules for participation, the conditions for the R&D services exemption of the EU Directives on public procurement⁴², the EU Treaty principles⁴³ and the competition rules⁴⁴ are fully respected.

Definitions

PCP must comply with the Horizon Europe definition: ‘*Pre-commercial procurement*’ means procurement of R&D services involving risk-benefit sharing under market conditions and competitive development in phases, where there is a clear separation between the procurement of the R&D services procured from the deployment of commercial volumes of end-products⁴⁵.

‘*Risk-benefit sharing under market conditions*’ refers to the PCP approach in which procurers share with suppliers at market price the risks and benefits related to the intellectual property rights (IPR) resulting from the R&D.

⁴² See Article 14 of Directive 2014/24/EU, Article 32 of Directive 2014/25/EU and Article 13(f)(j) of Directive 2009/81/EC.

⁴³ In particular, the fundamental Treaty principles on the free movement of goods and workers, the freedom to provide services, the freedom of establishment and the free movement of capital, as well as the principles deriving therefrom, such as the principles of non-discrimination, transparency and equal treatment.

⁴⁴ See, in particular, Article 2.3 of the 2014 R&D&I State aid framework.

⁴⁵ See the Horizon Europe Regulation and the PCP Communication COM/2007/799 and associated SEC(1668)2007. Note that PCPs can include the purchase of the first end-products that were developed, installed and tested during the PCP, but not the purchase of larger commercial volumes of end-products requiring quantity production beyond delivering the first products for the PCP.

‘Competitive development in phases’ refers to buying the R&D from several competing R&D providers in parallel and to comparing and identifying the best-value-for-money solutions on the market to address the PCP challenge. To reduce the investment risk for the procurer, reward the most competitive solutions and facilitate the participation of smaller innovative companies, the R&D is also split into phases (solution design, prototyping, original development and validation/testing of the first products), with the number of competing R&D providers being reduced after each phase.

‘Separation from the deployment of commercial volumes of end-products’ refers to the complementarity of PCP, which focuses on the R&D phase before wide commercialisation, and PPI, which does not focus on R&D but on wide commercialisation/diffusion of solutions. Procurers can, but are not obliged, to procure R&D results from a PCP.

Preparation and publication of the open market consultation and call for tender

To prepare the call for tender, an open market consultation⁴⁶ with potential tenderers and end-users must be held to broach the views of the market on the intended scope of the R&D. The results of this open market consultation must be taken into account to fine-tune the tender specifications, so that the gap between state-of-the-art industry development and the procurement needs justifies the procuring of R&D⁴⁷ services.

The PCP contract notice must be published EU-wide⁴⁸ in at least English. Offers must be accepted and communication with stakeholders must be enabled at all stages in at least English. All offers must be evaluated according to the same objective criteria, regardless of the geographical location, size of organisation or governance structure of the tenderers.

The prior information notice for the open market consultation and the contract notice must be advertised widely, using in particular Horizon Europe internet sites and national contact points. The Commission must be informed at least 5 days before the expected date of publication of the prior information notice for the open market consultation and 30 days before the expected date of publication of the PCP contract notice. The PCP call for tenders must remain open for at least 60 days.

Tender documentation, procurement and implementation of the contract

⁴⁶ The open market consultation should be organised in a way not to preclude or distort competition. In respect of the Treaty principles, the open market consultation must be announced well in advance and widely - via a prior information notice that is published at least 45 days before the first open market consultation meeting in the Official Journal of the EU - and enable potential tenderers regardless of their geographic location to participate at least in English. All information given in answers to questions from participants in the dialogue should be documented and published.

⁴⁷ In line with WTO GPA 2014 Article XIII(1)(f), R&D can cover activities such as solution exploration and design, prototyping, up to the original development of a limited volume of first products or services in the form of a test series. Original development of a first product or service may include limited production or supply to incorporate the results of field testing and demonstrate that the product or service is suitable for production or supply in quantity to acceptable quality standards. R&D does not include quantity production or supply to establish commercial viability or to recover R&D costs, nor commercial development activities such as incremental adaptations or routine or periodic changes to existing products, services, production lines, processes or other operations in progress, even if such changes may represent improvements.

⁴⁸ Through the Official Journal of the EU, using the TED (Tenders Electronic Daily) web portal.

The PCP contract that will be concluded with each selected tenderer must take the form of one single framework agreement covering all PCP phases, without contract renegotiations after the award. This framework agreement must contain information on the procedures for implementing the different phases (through specific contracts), including the format of the intermediate evaluations (including evaluation criteria and weightings) for each phase.

For PCP executed by a group of procurers, the R&D service contracts are awarded by the lead procurer and all selected tenderers can be paid by the lead procurer, or pro rata by each procurer in the buyers' group according to their share in the total PCP budget.

The PCP contract notice must contain information on the intended number of R&D providers that will be selected (minimum of three providers) to start the PCP, the number of PCP phases and the expected duration and budget for each PCP phase. The PCP must cover the full PCP life cycle of solution design, prototyping, and original development, including installation and testing of a limited volume of test series products/services in the procurer's/end-user's premises. Each of the three PCP phases can be split up into further phases if appropriate.

The following simplified and/or accelerated PCP procedures may be used: for PCP that require fast deployment⁴⁹, one specific contract may cover both the second and third PCP phase; if fewer than two tenderers are capable of performing the R&D services in the EU Member States or Associated Countries (for security contracts, this may be restricted to the Member States), the phase 1 contracts may be awarded to a minimum of two tenderers.

Procurers must avoid the use of selection criteria based on disproportionate qualification and financial guarantee requirements (e.g. with regard to prior customer references and minimum turnover). Functional/performance-based specifications must be used to formulate the object of the PCP call for tender as a problem to be solved, without prescribing a specific approach to be followed. Evaluation of the tenders must be based on best-value-for-money criteria, not just lowest price.

The PCP process must be organised to avoid any conflicts of interest, including in the use of external experts. Providers cannot be beneficiaries in an action during which the PCP is planned or undertaken.

The PCP process must require selected providers to locate the majority of the R&D activities, including the principal researcher(s) working for the PCP contract in particular, in the Member States or Associated Countries⁵⁰.

The PCP procurers must not reserve the R&D results exclusively for their own use. The providers generating results must own the attached IPR, and the procurers must enjoy at least royalty-free access rights to use the R&D results for their own use. The procurers must also enjoy the right to grant (or to require the granting of) non-exclusive licences to third parties, to exploit the results under fair and reasonable market conditions, without any right to

⁴⁹ Especially where a budgetary commitment for deployment is already available at the start of the PCP (fast-track PCP).

⁵⁰ For duly justified reasons of public security, this may be limited to the EU Member States.

sublicense. A call-back provision must ensure that, in case the providers fail to commercially exploit the results within a given period after the PCP, or use the results to the detriment of the public interest, including security interests, the procurers can require transfer of the ownership of the results.

The procurers must inform tenderers of the right to publish public summaries of the results of the PCP project, including information about key R&D results attained and lessons learnt (e.g. on the feasibility of the solution approaches to meet the requirements and lessons learnt for potential future deployment of solutions). Details that would be contrary to the public interest, would harm legitimate business interests (e.g. regarding IPR-protected specificities of their individual approaches to solutions) or could distort fair competition may not be disclosed.

To enable the procurers to establish the correct (best value for money) market price for the R&D service, in which case the presence of State aid can in principle be excluded, the PCP call for tender must be carried out in a competitive and transparent way in line with Treaty principles. In addition, the distribution of rights and obligations between procurers and providers (including the allocation of IPR) must be published in the PCP call for tender documents, to obtain a price according to market conditions (and rule out State aid). PCP contracts with providers must contain financial compensation according to market conditions⁵¹, compared to the exclusive development price, for assigning IPR to the providers.

Specific requirements for public procurement of innovative solutions (PPI)

Definition

PPI must comply with the relevant Horizon Europe definitions.

‘Public procurement of innovative solutions (PPI)’ means procurement where contracting authorities act as a launch customer for innovative goods or services which are not yet available on a large-scale commercial basis, and may include conformity testing.

‘Launch customers’, also called early adopters, refer to the first 20% of customers on the EU’s internal market that buy innovative solutions. The solutions have to be new to the procurers in the project, the procurers’ market segment or new to the EU’s internal market, and relevant to procurers in other Member States and/or Associated Countries.

‘Innovative solutions’ are new or significantly improved products, services or processes that have already been (partially) demonstrated on a small scale, and may be nearly or already available in small quantities on the market, but which have not been widely adopted yet. Typically, owing to the residual risk of market uncertainty, they have not been produced at a large enough scale to meet mass market price/quality requirements. This also includes existing solutions that are to be utilised in a new and innovative way; PPI does not include the procurement of R&D.

⁵¹ The market price should reflect the benefits allocated to the R&D provider (e.g. commercialisation opportunities opened up by the IPR) and the risks assumed by the R&D provider (e.g. the cost of maintaining the IPR and commercialising the products).

Preparation and publication of the open market consultation and call for tender

Unless the PPI is undertaken as a follow-up to an FP7, Horizon 2020 or Horizon Europe PCP⁵², or unless the situation is a low-value PPI below national procurement thresholds, the following obligations apply:

- To prepare the call for tenders, an open market consultation with potential tenderers and end-users must be held to inform the market well in advance of the upcoming PPI and broach the views of the market on the PPI's intended scope. Information retrieved from this consultation about the gap between perceived procurement needs and on-going industry developments must be taken into account in the PPI tender specifications, so that the PPI duly focuses on 'early adoption' of 'innovative' solutions.
- The market must be informed well in advance⁵³ of the target date for publishing the PPI call for tenders. Market readiness prior to deployment can be verified through the organisation of e.g. conformity testing, certification or quality labelling of solutions.
- The PPI contract notices must be published EU-wide in at least English, offers must be accepted and communication with stakeholders must be enabled at all stages in at least English. All offers must be evaluated according to the same objective criteria, regardless of the geographical location, size of organisation or governance structure of the tenderers.
- The prior information notices for the open market consultation, early announcements of the expected publication date of the PPI call for tender, and the PPI contract notice must be promoted and advertised widely, using Horizon Europe internet sites and national contact points in particular. The Commission must be informed at least 5 days before the expected date of publication of the PIN for the open market consultation and 30 days before the expected date of publication of the PPI contract notice. The PPI call for tenders must remain open for at least 60 days.

Tender documentation, procurement and implementation of the contract

Procurement procedures covered by the EU public procurement directives that do not involve procurement of R&D can be used. Restricted procedures with shortened timeframes for the submission of offers for reasons of urgency must not be used. Framework contracts/agreements with lots can be used.

For PPI implemented by a group of procurers, the specific contracts for procuring specific quantities of goods/services for each procurer can be awarded and the selected tenderers can

⁵² In the case of a PPI following a PCP that was implemented according to the conditions described in Annex I, the negotiated procedure without publication foreseen in the EU public procurement directives can then be used (Article 32(3)(a) of Directive 2014/24/EU, Article 50(b) of Directive 2014/25/EU and Article 13(j) of Directive 2009/81/EC). At least three offers must be requested, including from the R&D providers that successfully completed the preceding PCP.

⁵³ By means of a prior information notice in the Official Journal of the EU.

either all be paid by the lead procurer, or by each procurer in the buyers' group individually, for their quantity of goods/services procured.

Procurers must avoid the use of selection criteria based on disproportionate qualification and financial guarantee requirements (e.g. with regard to prior customer references and minimum turnover). Functional/performance-based specifications must be used to formulate the object of the PPI call for tenders as a problem to be solved, without prescribing a specific approach to be followed. Evaluation of the tenders must be based on best-value-for-money criteria, not just lowest price.

Procurers must organise their procurement to avoid any conflicts of interest, including in the use of external experts. Potential providers cannot be beneficiaries in an action during which the PPI is planned or undertaken.

To encourage fair and wide exploitation of results, ownership of IPR rights should be assigned to the party generating the IPR, except in duly justified cases (e.g. when that party is not able to exploit them).

The PPI call for tender must be carried out in a competitive and transparent way in line with Treaty principles. The distribution of rights and obligations between procurers and providers (including the allocation of IPR) must be published in the PPI call for tender documents, to obtain a price according to market conditions (and rule out State aid).